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THE MUSICAL PRACTICES OF THE */ˀAUNI* AND *≠KHOMANI* BUSHMEN

By PERCIVAL R. KIRBY

I. INTRODUCTION

The fact that a large number of Bushmen had been gathered together at Bain's Camp, near the junction of the Aoub and Nossop Rivers in the Kalahari Desert, affording an unique opportunity for the study of Bushman musical practices at first-hand, caused me to accept with alacrity the invitation to join the University of the Witwatersrand Kalahari Expedition.

Little accurate and detailed information about Bushman music has been gathered in the past. This I have already collected and examined critically. Few attempts, however, have been made to transcribe Bushman music in European notation, and these were generally brief, though of considerable interest. Chief among them were those of Burchell (1811), Weisbecker (1879), Stow (1880), Bleek (1925) and Kirby (1936).[1] Similarly, little Bushman music has been mechanically recorded, either by phonograph or by gramophone, and, when so recorded, has usually enshrined the art of a single individual.

I took with me on the expedition a clockwork dictaphone, with special recording horn and stand, a supply of wax cylinders, rubber tubing in various lengths (from four inches to one yard), a pitchpipe, a metronome, and a set of brass pan-pipes which had been made for me by my colleague Professor Paine, Head of the Department of Physics in the University of the Witwatersrand. These pan-pipes were tuned to a pentatonic scale derived from the harmonic series. They had already been used to test the pitch of the notes in a */ˀauni* Bushman song which had been recorded by Miss Bleek (1911) on the Lower Nossop River, and I was curious to see if the scale tallied with that in use at the present time.

A simple and fool-proof recording outfit was absolutely necessary under the circumstances, since the fine red desert sand got into everything, and all working parts had to be cleaned frequently. It was further desirable to make a number of records in places where it would have been extremely difficult, if not quite impossible, to take an elaborate electrical machine.

---

[1] Kirby, P. R., "A Study of Bushman Music," in *Bantu Studies*, Johannesburg, 1936, Vol. X, No. 2, pp 205-252. All the examples quoted appear in this study.

A number of excellent recordings of songs, both indigeneous and borrowed, were secured, as well as transcriptions in musical notation made on the spot. In order to render easier the transcription of such ensemble music as was recorded, I used a yard length of rubber tubing with which to connect the horn and the machine ; I was thus enabled, by moving the horn in the appropriate direction, to bring into prominence the voice of any particular individual at any moment, while retaining the sounds of the rest of the singers.

At first there appeared to be no musical instruments in use, although even from the moment of our arrival (at 3.30 a.m. on Friday, 26th July) singing was to be heard in the Bushman camp. But after careful and exhaustive enquiries I succeeded in identifying eight varieties of musical instruments and witnessed demonstrations of their use. The sounds of the stringed instruments could not be recorded *in situ ;* no machine of the phonograph type is sensitive enough to capture the delicate harmonic sounds which are their chief characteristic. I therefore adopted my usual field method of learning to play upon each of them, finally acquiring specimens of all.

II. INSTRUMENTAL MUSIC AND MUSICAL INSTRUMENTS

(*1*) *Instruments of Percussion*

(a) Ankle-rattles, called */kaˀe.*

These ankle-rattles, made from cocoons, are similar to those made and used by the Tswana tribes, who call them *matlo.* They are made as follows. A number of cocoons, such as those of *Gonometa postica,* which are found on mimosa trees, are collected. They are partially split lengthwise and the grubs removed. Holes are then pierced transversely, by an awl or similar instrument, on the split side in two places near either end, and two thin *riems* or thongs of leather are threaded through the holes. Many cocoons are thus strung together. A few fragments of ostrich egg shell are placed inside each cocoon, and the whole allowed to dry. In performance each dancer requires a pair of these rattles, which he winds round his legs and fastens securely. When the dancer stamps his feet on the ground the rattles give forth quite an attractive sound. The */kaˀe* are normally used by men, but women, when they dance alone, may also use them. A pair of these rattles, on the legs of the performer, is shown on Plate 1.

(b) Skin " drum," called *dou* (hide).

Strictly speaking, these Bushmen neither use nor even know a drum in the accepted sense of the term. The women, however, regularly employ as a temporary dancing platform the hide of a buck or other animal, which, in addition, fulfils the function of a drum. For this reason I have ventured to call it by that name, and accordingly to classify it among their musical instruments.

The hard hide is laid upon the sand, hairy side downwards. The surface of the sand is generally by no means flat, being covered by little hollows made either by the weather or by the feet of the Bushmen, and these act as resonators to the hide when the women dancers stamp upon it with their feet. The dancers on these occasions wear ankle-rattles, and the combined effect of rattles and hide is very characteristic. On one occasion on which I witnessed a performance of this nature two women, wearing ankle-rattles, danced on a hide, while five others sang and emphasised the rhythm by clapping their hands.

(2) *Sonorous Substances*

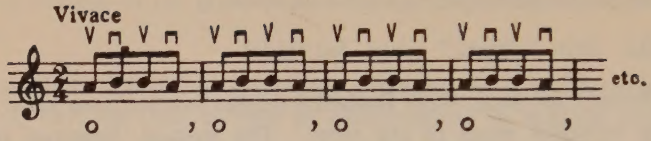
(a) " Jews' harp " of grass, called _*//ku //kxˀa¯si*.

The principle of the jews' harp appears in a rudimentary form in this instrument, which consists merely of a short length of thin, tough grass, sufficiently dry to be elastic, yet not brittle enough to break easily.

The performer holds the grass stalk in the left hand, in the manner shown on Plate 2, the main portion lying across his mouth, between his lips. With his right hand, which is held downwards as a rule, he plucks the loose end of the grass either forwards or backwards, his wrist being held loosely, and its movement being very graceful. At the same time he breathes outwards or inwards. He may perform while standing, kneeling or sitting, as fancy dictates.

The sound produced is a rapid whirring which, however, may be varied in character, according to the mode of plucking the grass and of breathing. For the most part the instrument would appear to be used for suggesting the movements of various animals, as in the case of the following example played by *Klein /ganaku*, who said that she was imitating the sounds emitted by a *hartebeeste* which was running away from a hunter who had shot at and missed it.

Ex. 1.



V	plucking forwards with backs of fingers.
⊓	plucking backwards with fronts of fingers.
O	breathing outwards with force.
,	breathing inwards rapidly.

I have used ordinary musical notation for this example for convenience only. It should be noted that the pitch was by no means definite; nevertheless there appeared to be a clear rise in pitch, as indicated, which was undoubtedly due to alteration in the shape, and therefore size, of the buccal cavity of the performer.

This instrument is played chiefly by boys and girls, although I have seen it in the hands of older people.

(3) *Wind Instruments.*

(a) Ocarina, called *//ŋasi /khosike.*

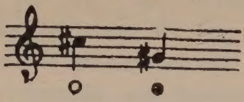
This is the only true wind instrument which I found among these people. It is made from a kind of wild cucumber (*Citrullus nandianus*), which is egg-shaped, and averages about four inches in length and three inches in diameter. Two openings are made in the fruit while it is still sufficiently soft, one at each end, and the interior is removed by a small twig. The fruit is then allowed to dry, when the instrument is ready for use.

The performer holds it horizontally to her mouth with one hand, and directs her breath across one of the openings, while with the palm of the other she may stop the second opening. The instrument thus yields two sounds, one when the second hole is open, and the other when it is closed. These two sounds vary in pitch at about the interval of a fourth or fifth, such interval, as well as the general pitch of the instrument, depending entirely upon chance.

Women alone are the makers of and players upon the *//ŋasi /khosike*, and they perform upon it at any time. They always make it from a fresh fruit when they feel inclined to play upon it. It is more of a musical toy than a regular instrument.

An example of the *//ŋasi /khosike* which I collected yields the following two sounds,

Ex. 2.



- o Open
- ● stopped

and a photograph of a woman playing upon it is seen on Plate 5.

(*4*) *Stringed Instruments.*

(a) Sinew string with skin resonator, called */ka/kanasi.*

This is one of the most remarkable musical instruments that I have ever seen. The Bushmen themselves declared that it was an instrument of the olden time, made and played by old women only. It was never used for dancing. The player, who was also the maker of the instrument, constructed it in the following manner.

She first of all made a long string from sinew, and since the method which she used is that employed in the making of strings for all stringed instruments, I shall describe it in detail.

A piece of the thick, flat sinew from the back of a goat was taken, well wetted, laid upon a flat stone, and well beaten with a rounded pebble. This process loosened the fibres, which were then separated out. Two small bundles of these fibres were then taken, passed successively between the maker's lips, in order that they might be moistened afresh, placed tip to tip upon her thigh, and rolled together by her hand in such a manner as to yield a twisted cord of two strands. A third bundle was later rolled into the end of one of the strands in order to keep the thickness uniform throughout. Fresh strands were successively added by rolling their tips into the last three or four inches of the original strands, all the ends being first moistened in order that they might temporarily adhere while the rolling process was being continued. Before it is fitted on a musical instrument, such a string of sinew is rubbed with the juice of leaf of the *≠khi*, or *witgatboom* (*Capparis albitrunca*).

Having made a string of this nature of about six feet in length, the old woman obtained a knobkerrie from one of the men, one cocoon (from a set of ankle-rattles), a roll of dry hide from the belly of a buck and a length of *riem.*

She stuck the knobkerrie in the sand, and sat down in such a position that the kerrie was immediately in front of her outstretched legs. She then looped the string of sinew round the knobkerrie, passing one half of it between the great and second toes of her left foot, and the other half along the side of her foot past the great toe, which thus kept the two halves of the string apart. She secured the two ends of the string to one tip of the cocoon rattle, through the other tip of which the *riem* was threaded. The *riem* she then passed across her breast, and tied its two ends behind her back. Finally she placed the roll of dry hide between the cocoon rattle and her chest to serve as a resonator.

By leaning backwards, the player could tighten the two strings so formed, and thus raise their pitch ; conversely by leaning forwards, she could slacken them, and thus lower their pitch. Both movements were used in performance. It will however be readily realised that not only are the original tunings of the strings fortuitous, but also their altered tunings, by reason of the fact that it is almost impossible to regulate their tension in this manner with any degree of accuracy. The pitch is therefore, in the nature of case, indefinite, and the noise of the cocoon rattle renders it still more obscure.

During one performance which I observed, the two halves of the string were plucked by the player : the left half by the thumb of the left hand, though sometimes by the first, second or third fingers of the right hand, and the right half by the first, second or third fingers of the right hand. On another occasion she plucked either half of the string with the thumb of the appropriate hand. Both times there was much more rattle and " buzz " than musical tone. I could not discover any systematic rhythmic or melodic scheme in the music, which was, of course, very faint. The use of two strings simultaneously is, however, of considerable significance, since all the remaining stringed instruments of these people utilize only a single string.

The name of the woman who made and played upon this instrument was */am ≠asi*, and she was the only one who could manipulate it. She is seen performing upon it on Plates 3 and 4.

(b) */khou*, or shooting bow, resonated by the mouth of the performer.

The regular shooting bow, when used without modification as a musical instrument, is played by men, both young and old, and also by boys in imitation of their elders, but never by women or girls.

Undoubtedly this is the oldest of the stringed instruments of the Bushmen, and its importance cannot be over-estimated, since without question the music performed upon it has powerfully influenced their original vocal music.

The bow is, of course, the usual weapon employed by these people, the stave being made from the wood of the */kasi*, or *rosyntjebos* (*Grewia flava*), and the string of sinew.

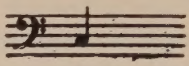
The method of performance is simple. The bow, with the string tensioned as for shooting, is held, usually in a horizontal position, in the player's left hand, which grasps the stave about its middle point. The right hand tip of the stave is placed across his mouth, between his slightly parted lips, but not touching his teeth. He strikes or plucks the string, at a point near his left cheek, with a piece of twig or stiff grass about a foot in length. I am convinced that the original striker was an arrow, and I actually observed one of the older boys using an arrow for the purpose; but at an early date the Bushmen must have discovered that a light twig favoured the production of musical tone much more than a relatively heavy arrow reed.

Now, if the bow string were to be struck with a *staccato* action, but without the mouth being used as a resonator, the fundamental note of the string would be heard, together with certain of its overtones or harmonics the presence or absence and relative proportions of which would depend upon the point at which the string was struck, the force of the blow, and so on. The result would be an harmonic chord, the components of which might be varied in quality and intensity.

But since the Bushman performer associates his buccal cavity, which he can deliberately vary in size, with his bow as a resonator, he can isolate and intensify a number of partials of the harmonic series, and by alternating these, can produce, simultaneously with the fundamental note of the string, a clear melody, the pitch of whose notes is definitely determined by natural law. This he regularly does, and, as a result, finds himself in possession not only of a series of sounds of fixed pitch, but of musical "intervals." These, as I have already suggested, have powerfully influenced the vocal music of the Bushman by providing him with definite "focal points."

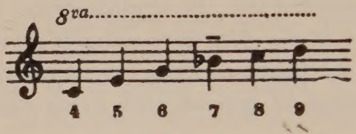
Now it is well-known that, other things being equal, the lower the position of a sound in the harmonic series producible from a string, the more powerful it is. But as there is a limit in size to the buccal cavity of the Bushman, it follows that he cannot resonate with it the lowest partials of the string of his three-foot shooting bow when he plays upon it in this fashion. The accident of circumstances has, however, caused him so to tension his bow that he can, without difficulty, isolate and intensify some of the higher partials. For example, on a bow, the string of which yields the fundamental sound

Ex. 3.



the Bushman can resonate, with his mouth, the following partials

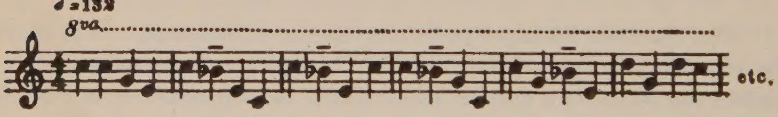
Ex. 4.



which are, as I have indicated, Nos. 4 to 9 of the harmonic series.

For example, upon his shooting bow, so tensioned that it yielded as its fundamental sound the note C, as in Ex. 3, old Abraham executed the following melody

Ex. 5.

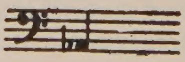


the fundamental sound of the string being heard throughout.

One very important point was the insistence upon the seventh harmonic ; this will also be noticed when the vocal music is examined.

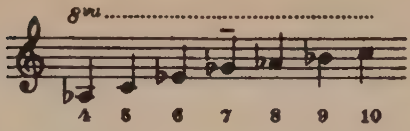
Another performer, whose string was tuned to A flat

Ex. 6.



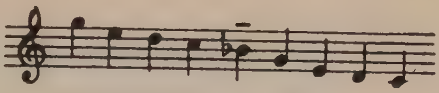
elicited from his instrument the following harmonics

Ex. 7.



It will be seen that the harmonics used constitute the elements of a pentatonic scale, which I write conventionally with the note C as the fundamental, thus,

Ex. 8.



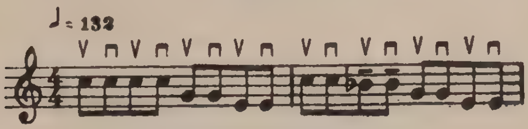
and this scale, as I shall show later, forms the basis for the original vocal melodies of these Bushmen.

But although I heard many tunes of this nature played upon the */khou*, in not a single instance was the eleventh harmonic used, nor did I hear it used in any of the melodies played upon the other stringed instruments, or in those that were sung. Apparently therefore, although these Bushmen are quite familiar with the lower partials of the harmonic series, there is a limit to their knowledge.

I examined the melodies played upon the */khou* with the utmost care, but I was unable to detect any definite formal scheme in them ; the performers seemed content to ring the changes upon the notes of the harmonic series, while preserving a steady rhythm. More extensive and intensive study might, however, reveal rudimentary formal principles analogous to those indicated later on in this study.

Old Abraham used a grass stalk as a plectrum, at times plucking the string once for each note, as in Ex. 5, and at others plucking it more frequently, thus,

Ex. 9.



V string plucked upwards.
⊓ string plucked downwards.

I also noticed that he occasionally used the forefinger of his right hand instead of a plectrum.

Other players struck the string, *staccato*, with a twig or grass stalk, and, as I have said, one boy actually used the shaft of an arrow as a striker.

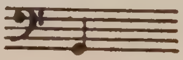
Abraham also hummed while playing upon the *|khou*, controlling the harmonics while vocalising. He also used laryngeal sounds to emphasise the rhythm.

The tone of the instrument, when heard a little distance off, is similar to that of the jews' harp, which it resembles in the nature of the sounds producible from it. The sound is, however, fainter than that of the jews' harp.

Although in most instances the performers squatted upon the ground while playing upon the *|khou*, they were quite able to perform upon it in other positions. One lay down upon his back to play, as did the *|kxam* Bushman photographed in the late seventies in Cape Town, a picture which I have reproduced and discussed elsewhere[2]. The more usual method of playing upon the *|khou* is illustrated in Plates 7 and 8.

On one occasion only I observed two Bushmen playing upon these instruments simultaneously, one with a plectrum and the other with a finger. They had adjusted the tension of the strings until both were approximately tuned to the note G.

Ex. 10.



They played for a very short time only, and the whole proceeding appeared to be rather unusual.

(c) *|khou*, or shooting bow, slightly modified, and used with a resonator of tin, called *tosi*.

This instrument is quite distinct from that last described. It is only played by males, and fewer of them can manipulate it than can the regular *|khou*.

The bow used, although made in exactly the same way as the ordinary shooting bow, has a stave which is slightly longer and rather more slender, and instead of a string of sinew the performer prefers a length of brass wire, if he can obtain it. The method of performance is as follows:

---

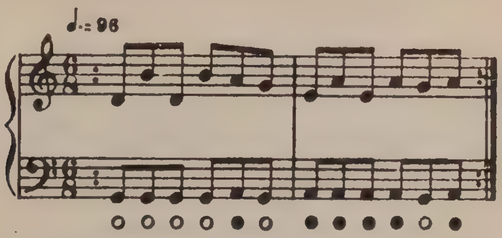
[2] Kirby, P. R. *The Musical Instruments of the Native Races of South Africa*, London, 1934, pp. 195-6 and plate 53 B.

The performer takes a tin, such as a two-pound syrup tin or one of similar size, with one end open, and places it on his bare stomach, the open end next his skin. He then presses the stave of his bow, which he holds vertically in his left hand, against the closed end of the tin, thus retaining it in position, as shown on Plate 6. The tin thus placed serves as a temporary resonator. A light twig, about a foot in length, is used as a striker, and is held in the right hand. The player strikes the string near its lower end with a light *staccato* action, producing a clear and ringing tone.

If this were all, the music produced by the instrument would consist merely of a single harmonic chord, which would vary somewhat in quality according to the distance of the striking point from the tip of the bow stave and the force of the blow. But in order to vary the pitch of the string the Bushman performer " stops " it by pinching it with the first finger and thumb of his left hand, at the same time moving the striker to a point above that at which the string is pinched. The difference in pitch between the string when " open " and " stopped " varies in different tunes, but it is usually a whole tone or a minor third.

In addition, a remarkable device is used by the player which entirely transforms the character of the music performed. By drawing the bow-stave downwards, the tin is rocked away from the body, and the open end may be more or less exposed. This has the curious result of enabling the player to isolate and to reinforce different partials of the harmonic series yielded by the string, and with these is heard the fundamental note of the string, whether it be " open " or " stopped." On the instrument so manipulated I heard several of the older boys play very attractive little tunes. Here is a specimen played by Witman, who was an expert performer.

Ex. 11.

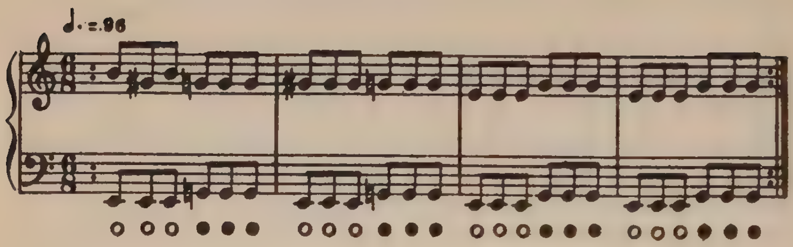


○ string " open."

● string " stopped."

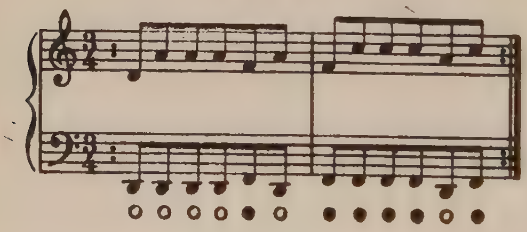
Another tune played by Witman was

Ex. 12.



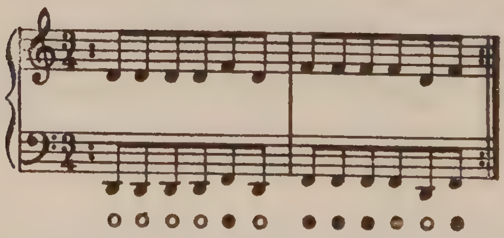
A third, performed by the same boy, was

Ex. 13.



Sometimes varied thus

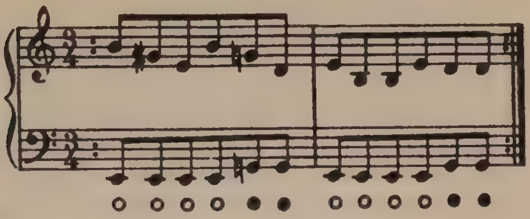
Ex. 14.



The effect of this melodic " doubling " at a distance of two octaves was very striking. Witman's ability to isolate particular harmonics and to weld them into his melodic schemes was almost uncanny. Nevertheless even he sometimes " struck a wrong note," since at times harmonics other than those which he obviously intended to produce would appear, owing to occasional (and excusable) irregularity in rocking the tin resonator, But even in these instances the melody followed its intended shape.

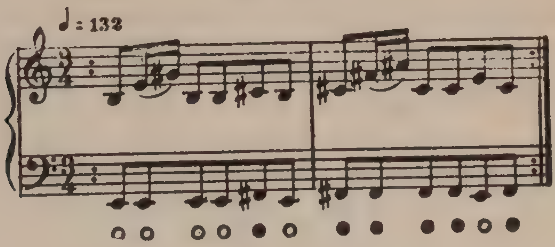
Another characteristic tune, played by a boy named *//ga¯//ŋa*, was

Ex. 15.



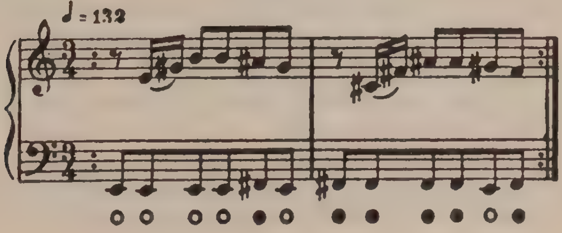
In all the tunes played upon this instrument which I have hitherto quoted, one sound, or rather chord, was produced for each blow of the striker. Witman, however, had still another device in store for me. By rocking the resonator *after* he had struck a chord, he was able to elicit other harmonics, after the first one which he had isolated, *over the same bass note*. The effect was curiously like a *glissando*. Here is the outline of a tune in which he utilized the device, written down as nearly as possible as he played it. Some harmonics may have been inadvertently omitted, but the reader will realise that at the speed at which the music was performed, the sounds of the harmonics were at times very elusive.

Ex. 16.



alternating, at times, with the phrase

Ex. 17.



(d) */khou*, or shooting bow, completely modified, and used with or without a resonator of tin; a skin bag, called *≠ʔui*, has also been used for this purpose.

This instrument, although now used by some of these Bushmen, appears to me to have been acquired by them from the Hottentots.

The instrument itself is a modified shooting bow, specially manufactured for musical purposes, and quite useless as a weapon, since the stave is strained until it is semicircular in form. It is played with or without a resonator, the string being either plucked by a finger or struck by a light twig. In all respects it corresponds to the *khas* of the Korana Hottentots,[3] and the *nɔkukwane* acquired from the Korana by some of the Tswana tribes. Among the Korana, however, the instrument is played by women only; among the Tswana by men and women. Among these Bushmen young males alone are the performers, and even they play upon it far less frequently than upon the mouth-resonated */khou*. In fact only one member of this particular group of Bushmen, a boy named *!koi!kan*, was really an expert performer upon the instrument. He is shown on Plate 7.

The player, having adjusted the tension of the string, which is thicker than the strings of the instrument previously described, until it yields a fundamental tone suitable for his purpose, seats himself upon the ground, places the lower end of the bow stave either upon the ground, or if a resonator of tin or skin is being used, upon that resonator, which lies upon the sand a little to his right. His right leg, passing over the bow stave, holds the lower end of the bow in position, while its upper end rests against his left shoulder. Taking the beater of twig between the first finger and thumb of his right hand, he strikes the string with a clean *staccato* action, thus producing the fundamental note of the string with a clear, ringing tone. But, by lightly touching the string, at the appropriate nodal points, with the tip of the third finger of his left hand, he can elicit several harmonics of that fundamental tone. Further, by bending, or rather stretching out, his lower jaw, and thus pressing his chin upon the string near its upper end, he can produce a second fundamental tone, which is usually a semitone or a tone higher than the original one, or thereabouts. The following are examples of the types of tune which I heard played upon this instrument in the desert. Symbols have been used above and below the stave to show the various technical devices employed by the performer, thus:

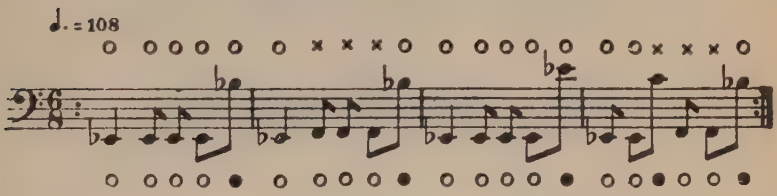
---

[3] Kirby, P. R., *The Musical Instruments of the Native Races of South Africa*, London, 1934, pp. 210-4, and Plate 58, A, B and C.

Above the stave o means string "open."
" × means string "stopped" by chin.
Below the stave o means fundamental sounds.
▪ means harmonic sounds.

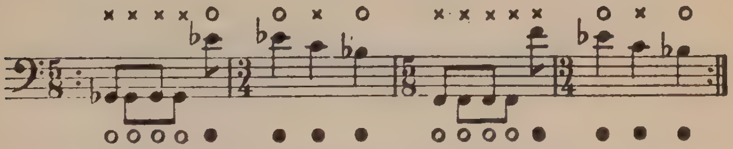
Further, notes with their tails turned downwards were played by the string being struck by the beater of twig ; those with their tails turned upwards by its being plucked by the finger.

Ex. 18.



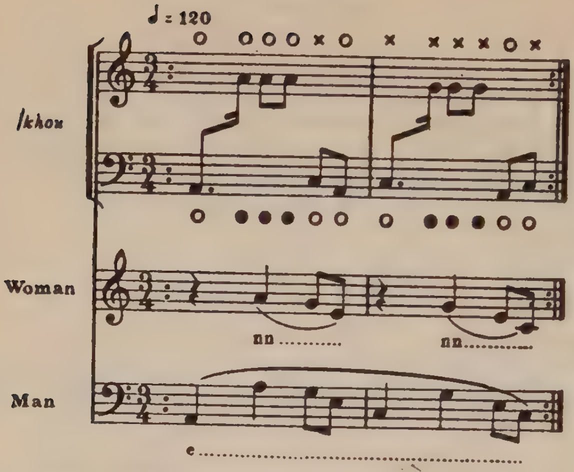
In this tune two fundamentals, E flat and F, were employed, but in the next three were used, E flat, F and G flat, two chin positions being utilized.

Ex. 19.



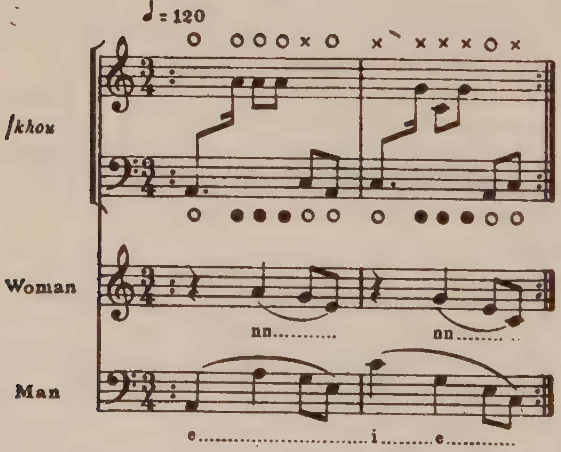
During the performance of a third tune, in which two fundamentals, A and C, and their harmonics, were employed, old Abraham joined in, singing a melody manifestly based upon the harmonic system of the instrument. A woman also sang short phrases which consisted of portions of the melody hummed by Abraham. At times the vocal melody was slightly varied, as was also that of the instrument. The string was sounded throughout by being struck by the beater.

Ex. 20.


♩ = 120
/khou
Woman
Man
nn ....
nn..............
e..

occasionally varied thus

Ex. 21.



The use of parallel fifths between the voices and the instrument is of great interest. It clearly indicates the influence of the harmonic series of the string upon the vocal melody of these people, and, further, shows the beginnings of the deliberate use of a rudimentary type of harmony, or rather polyphony.

These eight types of musical instruments were all that I could discover in use among these Bushmen, although some had heard of or seen other instruments belonging to other races, notably the Ovambo and Damara. One or two of the older Bushmen had seen the *outa* of the latter people, and even tried to show me how it was played. The *outa* consists of a shooting bow modified, or rather constructed specially, for musical purposes by being made slenderer than usual, and by having the sinew string tied back to the stave near the middle by means of a loop of thin sinew. The instrument is held near its middle point to the player's mouth, which resonates harmonics when either half of the string is struck by a twig or light reed. But although the Bushmen understood the manner of tying back the bow string, they were completely at a loss as to how the instrument was played, and admitted the fact. All they could do was to try to sound it in the same way as they were accustomed to sound their mouth-resonated */khou*, but naturally without success, since the two instruments involve separate and distinct techniques. Old Abraham, shaking his head, said that it was not a Bushman instrument, but belonged to the "Hottentots." This I do not think is the case, for I have never seen it made or played by any Hottentot, and there is no historical reference to its use by that people, so far as I am aware.

III. VOCAL MUSIC

The vocal music of these Bushmen may be classified generally under three heads, each having its appropriate subdivisions, as follows:

- (1) *Indigeneous Songs.*
    - (a) Dance Songs.
    - (b) Singing games.
    - (c) Lullabies.
    - (d) Singing to the accompaniment of instruments, whether indigeneous or borrowed.
- (2) *Songs acquired from Hottentots.*
    - (a) Singing game.
- (3) *Songs acquired from Europeans.*
    - (a) Hymns.
    - (b) Secular Songs with Afrikaans words.
    - (c) Vocal imitations of European musical instruments.

(1) *Indigeneous Songs.*

The songs in this group are distinguished by the fact that the mode or scale used in performance consists entirely of sounds which have been derived directly from the harmonics yielded by the string of the */khou* or shooting bow. These notes form a pentatonic scale or mode identical with that shown in Ex. 8.

(a) Dance Songs.

In these, the most highly organised of indigeneous Bushman musical ensembles, the singing is executed by women and girls, while men dance, or by women and girls, while women dance. The dancers are usually provided with the */kaŀe* or ankle-rattles of cocoons, and, in the case of the women's dances, at times also with the *dou* or " drum " of hide.

But the most significant fact about the dance songs is that no words are used. Instead, the singers intone their melodies, within the limits of the mode used, to vowel sounds which are selected in such a way as to provide an easy vehicle for the " yodelling " which is characteristic of these songs. This yodelling is identical in technique and effect with the yodelling practised by the peasants of the Tyrol, consisting as it does of sounds sung alternately in the " chest " voice and in *falsetto*.

I must admit that I was very surprised to find this method of singing practised by the Bushmen, for *falsetto* production is very rarely heard among the Native peoples of South Africa. The only tribe that I have previously heard yodelling systematically is the Karanga of Fort Victoria, Southern Rhodesia. But the fact that it is actual yodelling that is practised by these Bushmen explains clearly certain passages in the writings of two travellers, Burchell[4] and Alexander,[5] that have hitherto been obscure to me. These passages I reprinted in full and commented upon in my *A Study of Bushman Music.*[6]

Both passages are descriptions of dance-songs, in which no words were used. Burchell, who witnessed a Bushman dance at Kaabi's Kraal, near Prieska, in March, 1812, not only described it in detail, but also noted down the melody, using the syllables *Aye O*, *Aye O*, etc., to indicate the vowel sounds which he heard, thus (the choral melody alone is quoted here):

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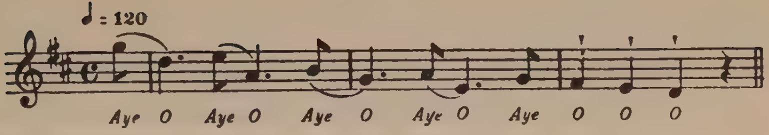
[4] Burchell, W. J., *Travels in the Interior of Southern Africa*, London, 1824, vol. ii. pp. 66-6, and 84-82.

[5] Alexander, J. R., *An Expedition of Discovery into the Interior of Africa*, London 1838, vol. ii. pp. 25 and 147.

[6] Kirby, P. R., " A Study of Bushman Music," in *Bantu Studies*, Johannesburg, 1936, vol. x. no. 2. pp. 211-15.

Ex. 22.



In the light of the illustrations which I shall shortly place before the reader I maintain that there is no doubt whatever that Burchell made, to the best of his ability, an attempt to note down the yodelling of the Bushmen, and a number of other points in his description also show that it was a dance song of the type we are about to discuss, with slight differences, that be observed.

A second dance was seen by Burchell at Kraii-Kop Kraal, not far from Kaabi's Kraal, and his description and musical notation again suggest that it was a " yodelling " type of dance-song which he heard.

Alexander, while journeying through Namaqualand in April, 1837, saw a Bushman dance at Ababis, or " Calabash " Kraal, and, in his description of it, noted the fact that the women, drawn up in line opposite the fire, sang to the syllables *ei oh ! ei oh !* clapping their hands on the syllable *oh*. Here again I would suggest that what Alexander heard was Bushman yodelling.

It may, however, be asked why, if Burchell and Alexander heard the Bushmen yodelling, they did not use that term to describe the performance. The explanation is very simple. The yodel, or "*jodel*," is " a characteristic feature of the original form of *Landler* as sung in the Austrian and Bavarian Tyrol," and " the fashion for Tyrolean music in England was first set by the visit of the Rainer family in May, 1827."[7] But, although the songs of the Tyrol, with their characteristic yodelling, had thus become well-known in London, the word " yodel " was not incorporated into the English language for some time. According to the New Oxford Dictionary it first figures in the journal of Sir Walter Scott in the entry of 4th June, 1830. This journal was, of course, in manuscript, and was not published until 1890. But from the quotation as it appears in the Oxford Dictionary a very important phrase has been omitted. The complete passage, including the phrase in question, which I have printed in italics, is as follows :[8]

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[7] Grove, G., *A Dictionary of Music and Musicians*, London, 1928, vol. v. p. 418 b., Article " Tyrolienne."

[8] Scott, Sir W., *The Journal of Sir Walter Scott* (1824-32), Edinburgh, 1891 (New Edition), p. 746.

"Anne wants me to go to hear the Tyrolese Minstrels, but though no one more esteems that bold and high-spirited people, I cannot but think that their yodelling, *if this be the word*, is a variation, or set of variations, upon the tones of a jackass, so I remain to dribble and scribble at home."

Sir Walter Scott was in Edinburgh on 4th June, 1830, so it was in that city that the Tyrolese peasants were performing. But although such performances had been given in Britain since 1827, Sir Walter's description shows that the word "yodelling" was by no means familiar, even in 1830. It is therefore not surprising that Burchell, who had been away from England since 1805, did not use it, and improbable that even Alexander could have known it, since from 1826 he had been almost constantly travelling, visiting Persia, the Balkans and South America before arriving in South Africa.

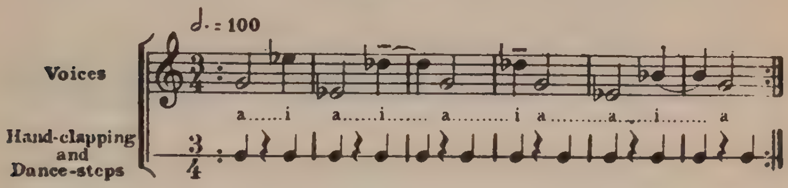
The etymology of the word "yodel" is also of importance. According to the Oxford Dictionary, "yodel," also spelt "youdle," "yoddle," "yodle" and "jodel," is derived from the German "*jodeln*," and in the dialect of Bavaria from "*jodeln*" or "*jolen*," which apparently means the utterance of the syllable "*jo*." This would be better expressed phonetically as "*io*," in which form it will be seen to be identical in sound with the syllables used by Burchell and Alexander, and with those uttered by the Bushmen whose music we are considering.

The dance songs present another curious problem. When I first heard them, on the morning of Friday, 26th June, the Bushmen stated that they had different songs, and even suggested names for them. But although I heard then and on subsequent occasions many such songs, I did not find that any were repeated exactly as I had heard them before. Moreover, even when asked to repeat a song which they had previously sung, the Bushmen seemed quite unable to recall it, and, instead, created a new tune on the spot.

All the songs of this class were, however, constructed on the same principle. One woman, selected by common consent, or self-elected, would act as leader or "precentor." She would begin a rhythmless "tune pattern," which was imvariably based upon the mode shown in Ex. 8, and followed this by inaugurating a simple rhythmic phrase in which the melodic suggestions contained in her "tune pattern" were developed. This phrase was sung to vowel sounds, deliberately chosen so as to favour the production of alternate "chest" and *falsetto* notes, resulting in the characteristic yodelling to which I have referred. The "precentor" marked the rhythm by clapping her hands. As soon as she had established her tune, the remaining women joined in, some attempting to follow her in unison (although in some instances the higher notes would be taken one octave lower, or the whole at the octave below: others, again, would follow her canonically, imitating the original melody, more or less, at a short interval of time. Or, once the basic melody was established and was being sung by the majority of the women, the "precentor" would add a "free part" to it, which consisted of elaborate yodelling, generally in a "cross rhythm." At times, too, several women would participate in this "contrapuntal yodelling," the result being exceedingly complex to the European ear, although the principles governing it were, in fact, extremely simple.

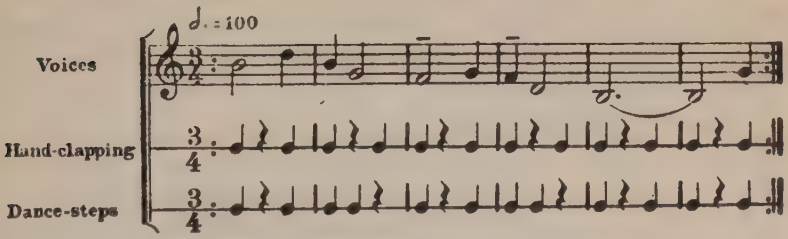
The basic melody of one such dance-song, heard on the evening of Tuesday, 30th June, was as follows:

Ex. 23.


♩. = 100
Voices
a......i a......i....... a.......... i a..........a.......i........ a
Hand-clapping and Dance-steps
3/4

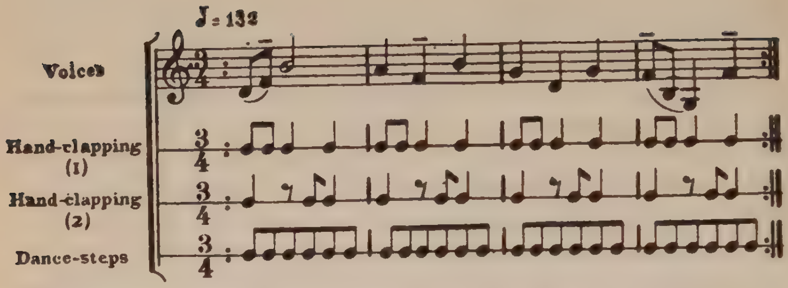
A second tune had only one hand-clapping rhythm, but contrasting dance-steps.

Ex. 24.



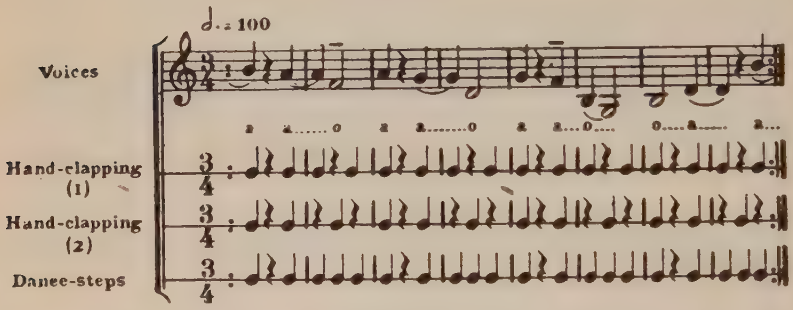
A third tune was accompanied by two hand-clapping rhythms. In this example I have also indicated the rhythm of the dance-steps.

Ex. 25.



A fourth tune likewise had two hand-clapping rhythms.

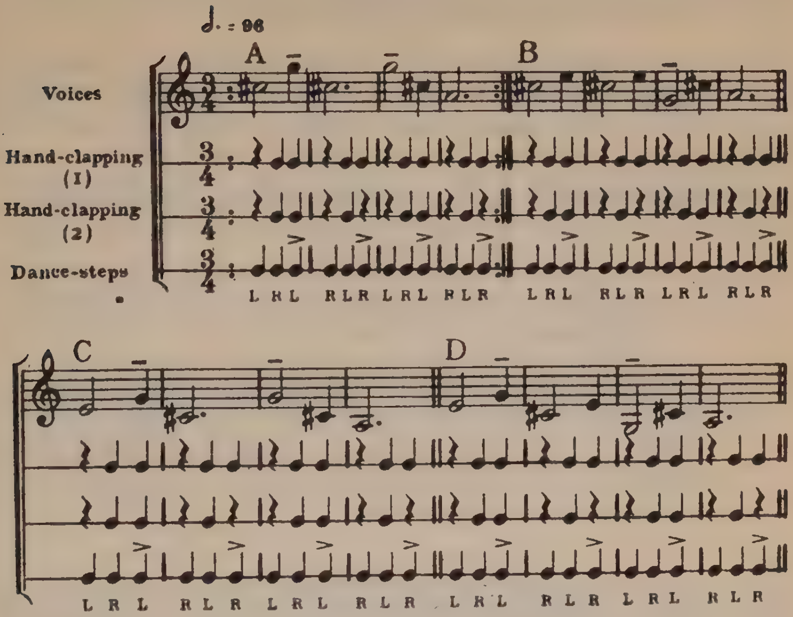
Ex. 26.



It should be noted that, while the songs in Ex. 23 and 24 each consist of a single six-measure musical sentence, that in Ex. 25 is a single four measure phrase, and that in Ex. 26 an eight-measure sentence. All are, moreover, in triple time.

Hitherto I have illustrated only the basic melody, shorn of its ornaments and variants. To indicate the nature of the latter, I quote a fifth song, in which I noted the alternation of four distinct sections, which I have marked A, B, C and D. Of these, the most important appeared to be A, since at first the melody consisted only of repetitions of it. Later on, sections B, C and D were used by way of contrast.

Ex. 27.


♩. = 96
A
B
C
D
Voices
Hand-clapping (1)
Hand-clapping (2)
Dance-steps
L R L R L R L R L R L R L R L R L R L R L R L R
L R L R L R L R L R L R L R L R L R L R L R L R

The alternation of the sections appeared to be fortuitous ; I at least could discover no system in it. For example the following represents the alternations used during the early part of the dance, after A had been well established.

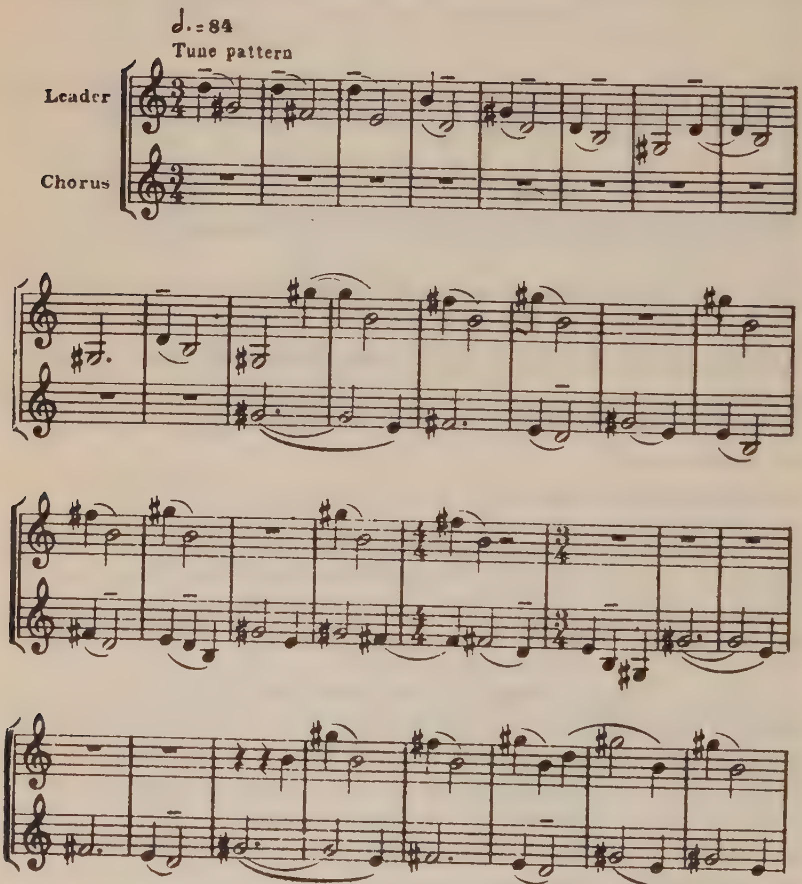
A A B B B A A B A A A B A A A B C A A A D

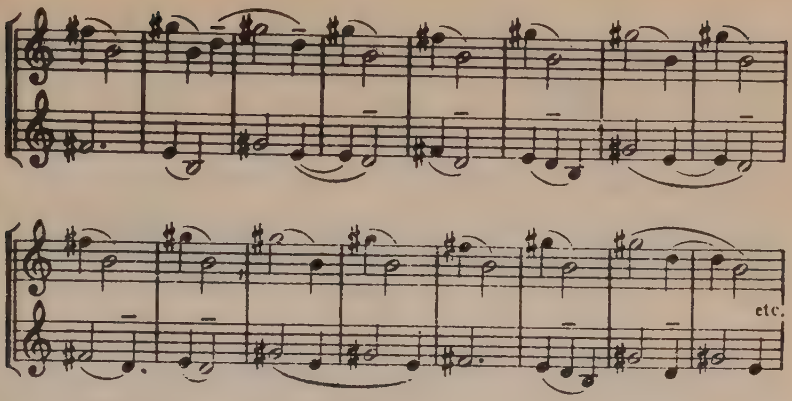
I would, however, stress the point that not all the singers made the alternations at the same time, though the majority did so. They seemed to depend largely upon the will of a particularly insistent individual, who made the change when she felt so inclined, and was followed by the rest.

To illustrate the ornamental use of yodelling, apart from its employment in the performance of the principal melody, I quote the opening measures of a dance-song which I heard and recorded. In this song the leader or " precentor " began, in the time at which the dance was to be executed, her " tune-pattern," yodelled throughout. At the eleventh measure the other singers joined in, keeping time by clapping their hands on the first beat of every measure, while the leader executed a more or less free yodelling part above. I must point out that the melody sung by the " chorus," as I have called the majority of singers, followed closely the outline which I have written down ; nevertheless from time to time individual singers departed from it to some extent, or even interpolated a free yodelling part on their own account. But the melody as I have written it down is substantially as it was performed.

The reader will notice that at the twenty-first measure, before the pattern had become firmly established, some of the singers upset the rhythm. On this the leader ceased yodelling, and began to bully the offenders. The latter, however, had realised their error, and soon recovered the rhythm.

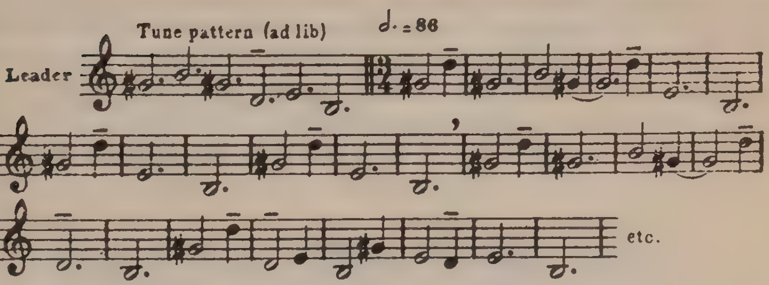
Ex. 28.





The use of the " tune-pattern " and the establishment of the melody by the leader will also be seen in the following illustration, in which only the opening is quoted.

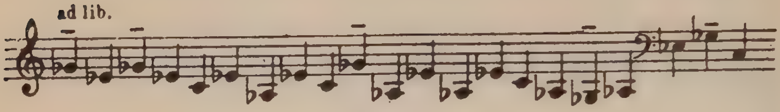
Ex. 29.



A dance-song of similar type was sung for me by some of the men In this performance no young boys took part. The song displayed the same features as did those of the women, but was far less definite in character from a rhythmical point of view. The scale used appeared to be the same, though the pitch of some of the notes was, at times, rather indefinite, and tended to be obscured by the frequent *falsetto* sounds which were due to the yodelling. As in the case of the women's songs, a leader began by intoning a " tune-pattern," and the rest joined in, imitating the intervals of the pattern generally, although commencing at any point of time. In fact the whole performance, which was particularly elusive, appeared to consist of *extempore* utterances, by individuals, based upon the " tune-pattern " of the leader, and confined to the notes of the characteristic mode.

The "tune pattern," which was sung in very free time, consisted of the following sounds

Ex. 30.

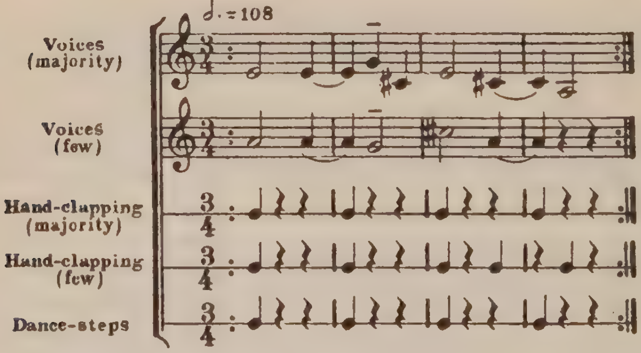


This is merely the skeleton of the pattern, since *falsetto* notes, generally of indefinite pitch, occurred between the sounds shown ; by indefinite I mean that the male singers did not "focus" the *falsetto* notes as the women invariably did.

(b) Singing games.

The only indigeneous example of this type of dance-song that I heard was the "Baboon" dance. For this song the women who could get them wore the ankle-rattles, and sang in two parts, one of which was executed by the majority of the performers, and the other by a few only. The singers also emphasised the rhythm by hand-clapping, two rhythms being employed simultaneously, the simpler coinciding with the dance-steps. The whole ensemble was as follows :

Ex. 31.



(c) Lullabies.

|ganaku, taking a child upon her knees, "sang" a "lullaby" to it. The performance, however, consisted largely of speech, her utterance being exceptionally rapid and vehement ; but the speech-tones were

likewise exaggerated, thus causing a strong suggestion of underlying melody at times. Occasionally, however, she would burst into actual melody, employing the typical yodelling style of singing. The pitch of the notes was quite clear, but the rhythm was astonishingly free.

(d) Singing to the accompaniment of Musical Instruments, indigeneous or borrowed.

(1) Dance-songs are, as has already been noted, usually performed to the accompaniment of the ankle-rattles, and in some instances to that of the skin drum also.

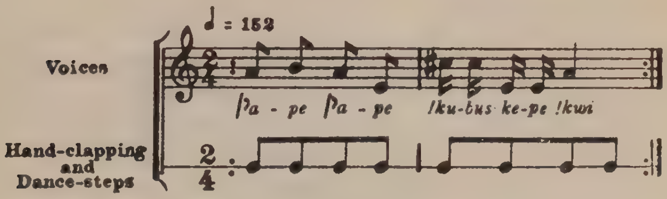
(2) Abraham on one occasion sang, without words, while performing upon the mouth-resonated */khou* (Musical Instruments, f). He also used guttural sounds to emphasise the rhythm. But this performance was not continued for long, and I found it impossible to note down the melody, since the pitch of the vocal sounds was far from clear.

(3) Abraham and one of the old women also sang, without words, to the music played upon the modified */khou* (Musical Instruments, h). This performance has already been described in detail, the music being given in Exx. 20 and 21.

(2) *Songs borrowed from Hottentots*

One singing game, performed by the younger girls and women, appears to have been borrowed from the Hottentots. This is the Bushman version of the familiar "Oranges and Lemons." In this game the two leaders stood in the centre of the group, facing each other, and keeping time by clapping their hands each with the other, right meeting left, and left meeting right. The remaining girls, holding hands, trotted round in a ring, singing the following melody to words which are undoubtedly of Hottentot origin:

Ex. 32.


𝅗𝅥 = 152
Voices
ǂa - pe ǂa - pe /ku-bus ke-pe !kwi
Hand-clapping and Dance-steps
2/4

The melody is so different in its nature from all the indigeneous tunes which I heard and recorded that I am certain that it has been borrowed as well as the words. The latter mean "*Pauw, pauw*, the egg is broken." The *pauw* is, of course, the great bustard.

The other children's games which I observed, though rhythmical and accompanied by hand-clapping, were spoken, not sung.

(3) *Songs borrowed from Europeans*

Certain snatches of melody which I heard some of the young girls humming led me to investigate the extent to which they had acquired the ability to sing, or at least to mimic, the music of Europeans. The results were astonishing. I recorded quite a number of tunes of different types, and the most remarkable feature displayed in them was the fact that the girls were able to lay aside their own scale-system and adopt, or rather imitate, that of the European with uncanny fidelity. Not content with this, they also attempted, with considerable success, to utilize the European harmonic system.

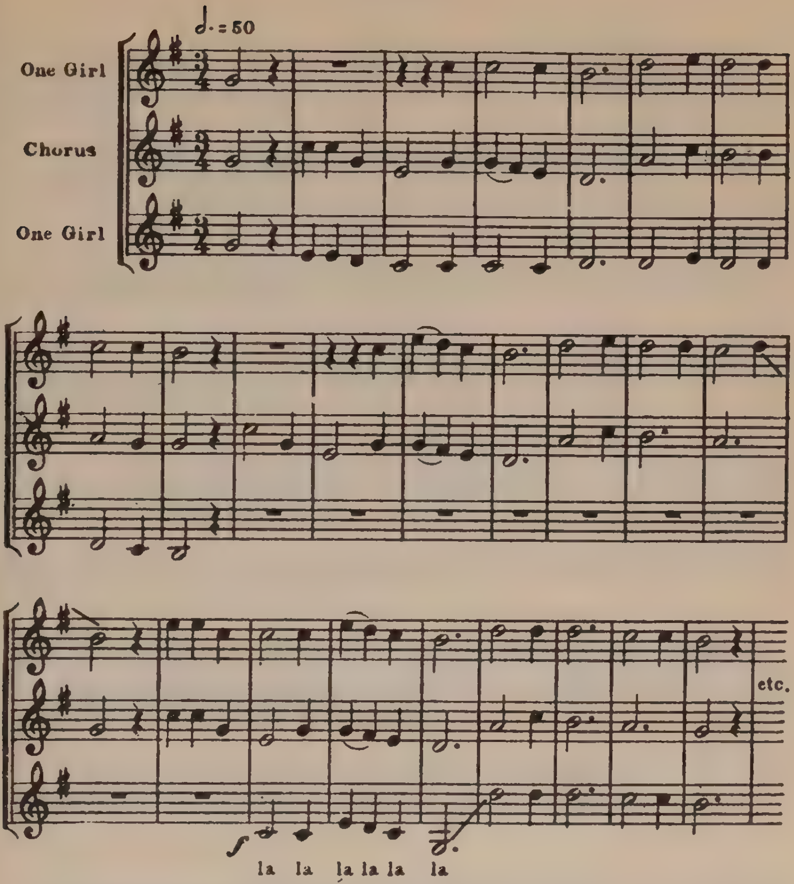
This capacity on the part of Bushmen has been commented upon by several travellers in the past, but I must confess that I had considerable doubts about it until actually observing it myself.

(a) Hymns.

Some of the girls must have had the opportunity of hearing hymns sung, in all probability at Kuruman, outside the church, and in so doing, had picked up the main outlines of the music sung. They may, of course, have been present during family prayers on some farm, but I incline to the former suggestion, since the music as sung by them was charged with many of the characteristics which are associated with the singing of a small but enthusiastic congregation, the whole performance forming an unconscious parody of what the girls heard. Two such hymn-tunes were sung by them, without words.

In the first of these it is interesting to note that the first measure consists of the final chord of the hymn. It is just what one might imagine the girls to have heard as they approached a church and suddenly came within hearing of the choir. The rest of the tune consists merely of a series of repetitions of the last eight measures of the hymn, sung in two or three parts, the harmony being executed both above and below the melody. Here and there one of the girls would introduce an imitation of some vehement bass singer, whose voice may have become particularly prominent at that point.

Ex. 33.

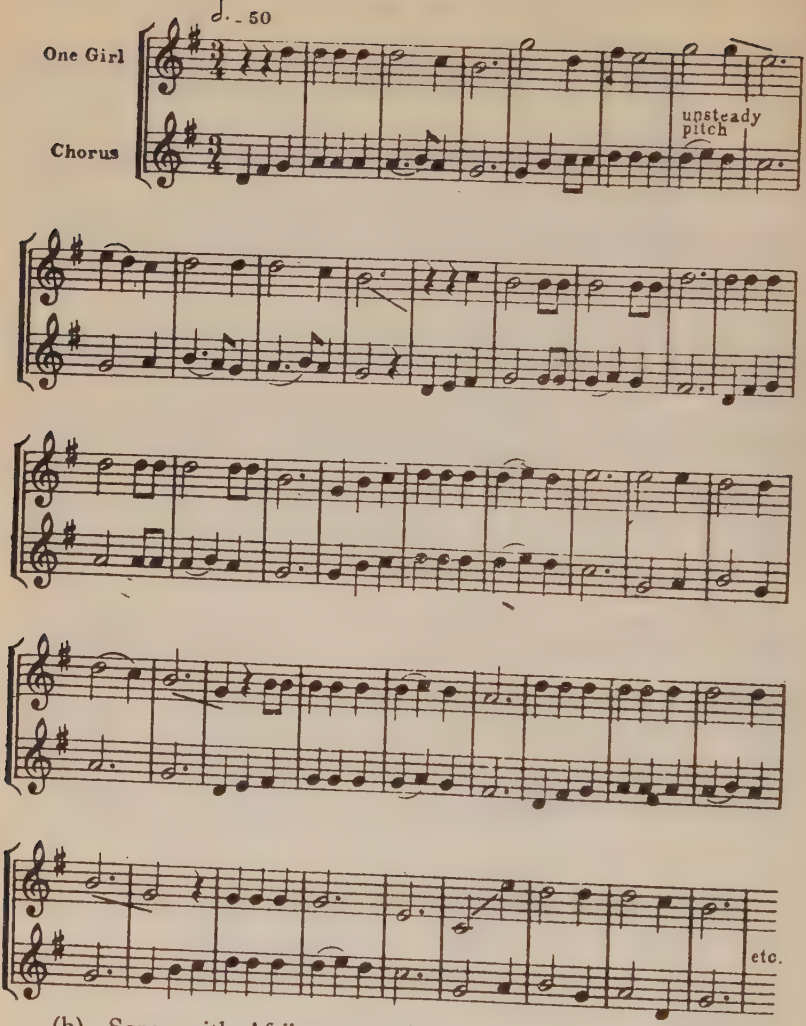


The progression of the parts is of special interest to the musician, as is also the extravagant *portamento* indicated by sloping lines. But in truth the whole was sung with a good deal of *portamento*, which tends to endorse my theory respecting the manner in which the hymn was acquired by the girls.

In the second hymn two-part harmony was used throughout, the added part being above the melody, except in one place. In this hymn also one of the singers introduced an imitation of an enthusiastic bass singer.

The melody of this hymn is complete, but it is significant that, in this instance also, the girls did not begin at the beginning of the tune, but at the fifth measure.

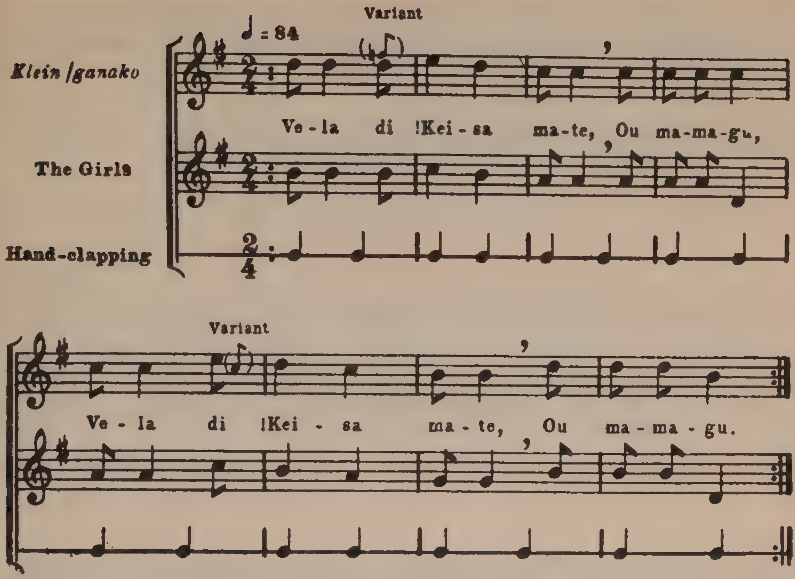
Ex. 34.



(b) Songs with Afrikaans words.

After I had heard a number of genuine Bushman songs, and had asked for more to be performed, *Klein /ganaku* began the following tune, which at once betrayed, in both words and music, its European origin. As soon as the other girls had joined in, */ganaku* began to add an upper part. Not only were the singers able to lay aside their own scale-system in this song, but */ganaku* showed that she was able to adopt the European system of harmony in a simple way.

Ex. 35.


♩ = 84
Variant
Klein /ganaku
The Girls
Hand-clapping
Ve - la di !Kei - sa ma-te, Ou ma-ma-gu,
Variant
Ve - la di !Kei - sa ma - te, Ou ma - ma - gu.

The words are a curious medley, and mean " my old mother gave me a skin for an apron." */ganaku* explained that she picked up the song from the Hottentots who came to work on a farm near which she lived for a time.

After hearing this song, I asked the girls if they knew any more " White man's music," and after a little persuasion they sang quite a number of European songs.

Since many of the Bushmen could speak Afrikaans tolerably, it was perhaps not surprising that some of the younger girls had picked up several songs which they had heard. These songs are of great interest. According to *klein /ganaku*, they were heard by her at farms near Kuruman, at Christmas time, when some of the farmers would gather a few of the Bushmen together. */ganaku* was the leading spirit in the performance of these songs, and to her the others always turned when another tune was asked for. She, too, was responsible for most of the harmony, and it was undoubtedly under her guidance that the songs had been learned. The performances took place in the evening, before a roaring fire which had been lit upon the sand. Note-taking and recording under these conditions was far from easy ; nevertheless I succeeded in securing quite a number of songs, the words of some being later noted down by Professor

McCrone, whose versions have been incorporated in the transcription when they have been found to fit the music.[9] For it must be understoo that it is extremely doubtful if the girls really comprehended the meanin of what they were doing ; the musical evidence goes far to support thi suggestion.

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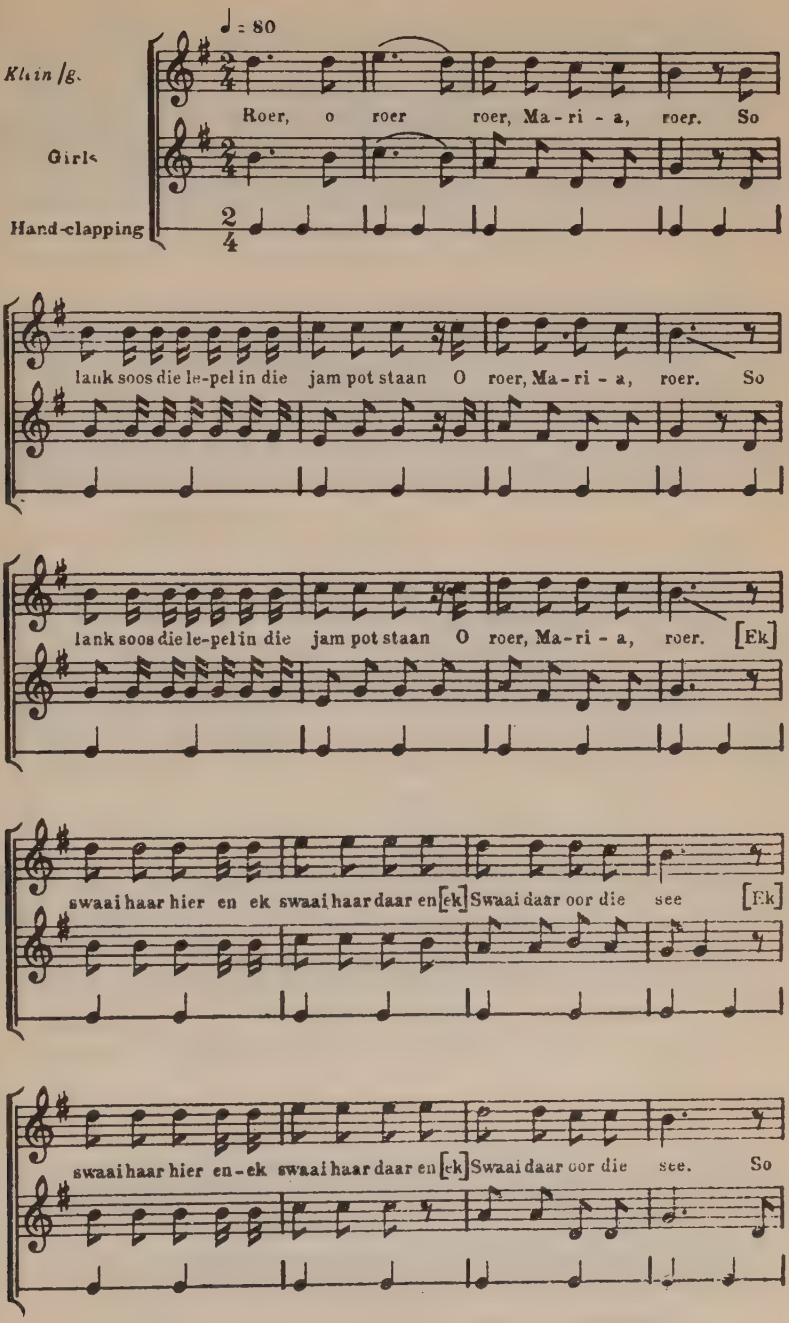
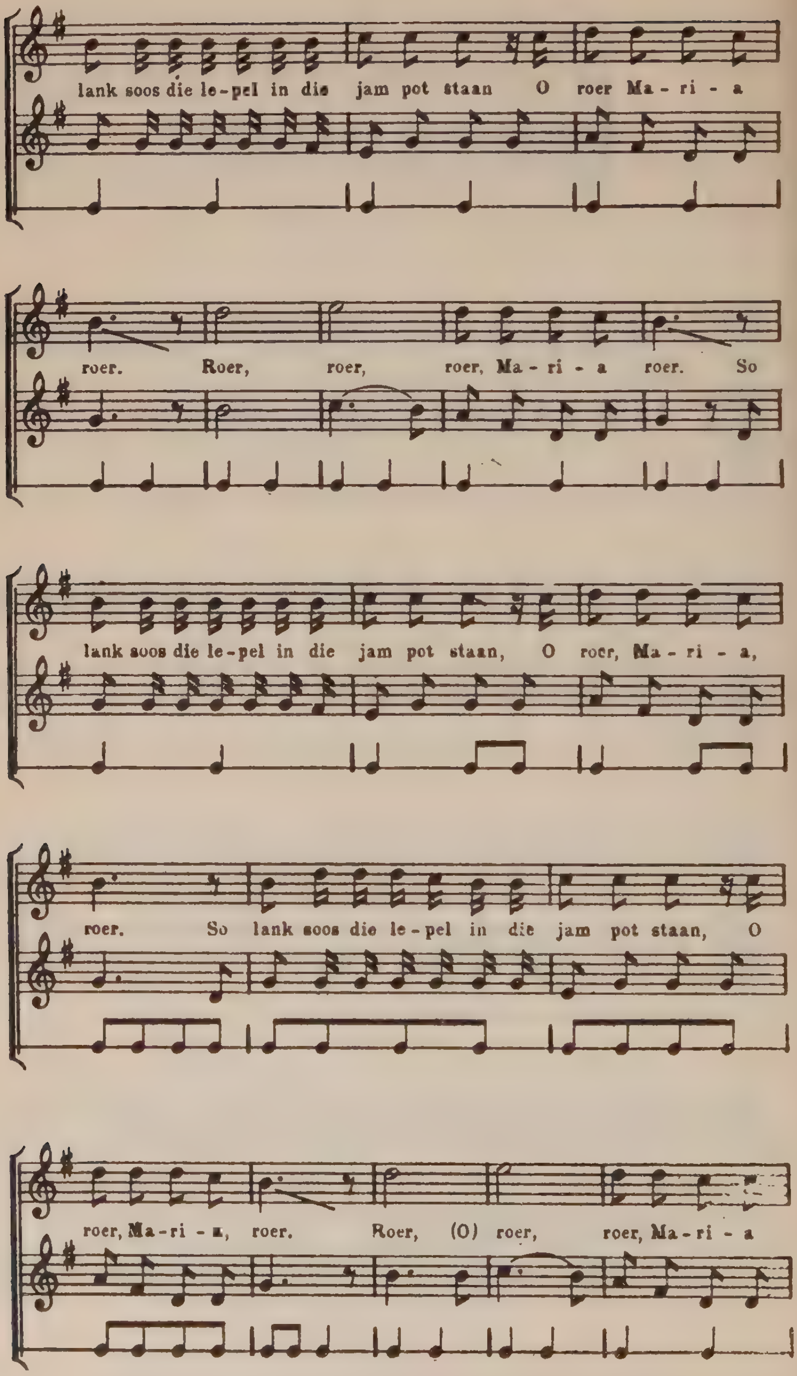
[9] The words of the songs, with translations, appear at the end of this study.

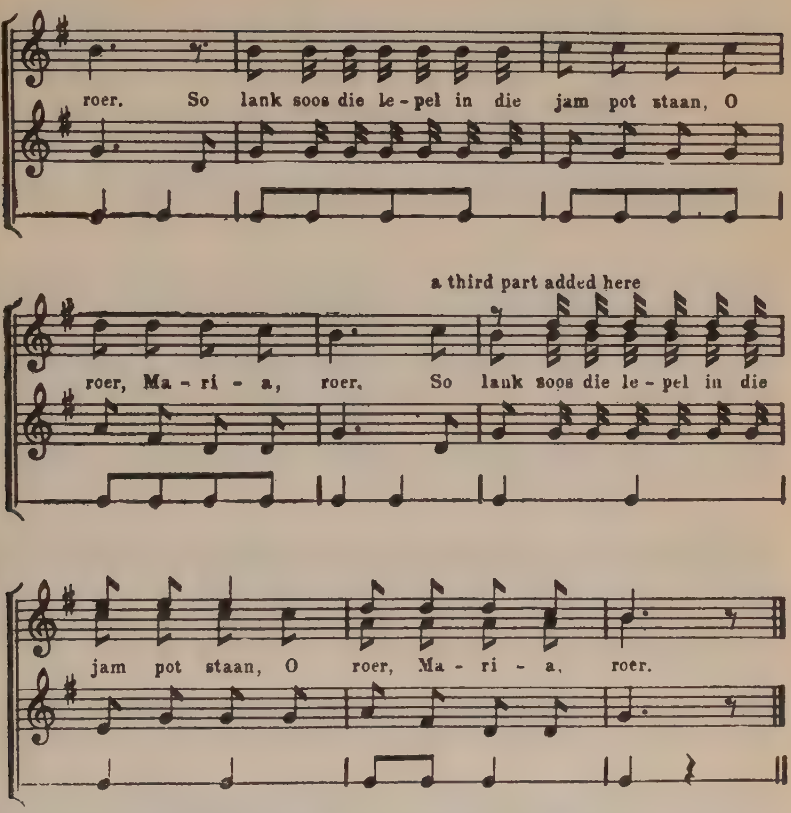
Ex. 36.


♩ = 80
Klein /g.
Girls
Hand-clapping
Roer, o roer roer, Ma-ri-a, roer. So
lank soos die le-pel in die jam pot staan O roer, Ma-ri-a, roer. So
lank soos die le-pel in die jam pot staan O roer, Ma-ri-a, roer. [Ek]
swaai haar hier en ek swaai haar daar en [ek] Swaai daar oor die see [Ek]
swaai haar hier en-ek swaai haar daar en [ek] Swaai daar oor die see. So

(36 continued)

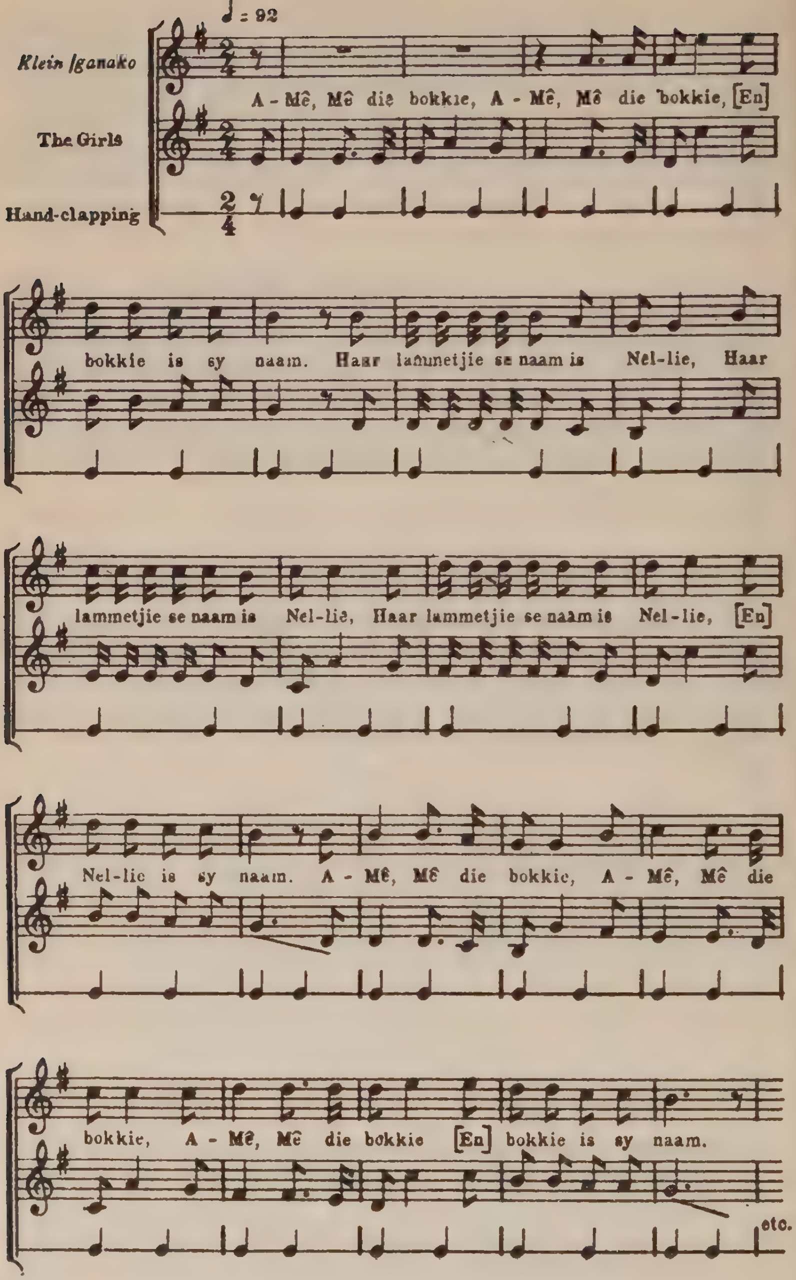

lank soos die le-pel in die jam pot staan O roer Ma-ri-a
roer. Roer, roer, roer, Ma-ri-a roer. So
lank soos die le-pel in die jam pot staan, O roer, Ma-ri-a,
roer. So lank soos die le-pel in die jam pot staan, O
roer, Ma-ri-a, roer. Roer, (O) roer, roer, Ma-ri-a

(36 continued)


roer. So lank soos die le - pel in die jam pot staan, O
roer, Ma - ri - a, roer. So lank soos die le - pel in die
a third part added here
jam pot staan, O roer, Ma - ri - a, roer.

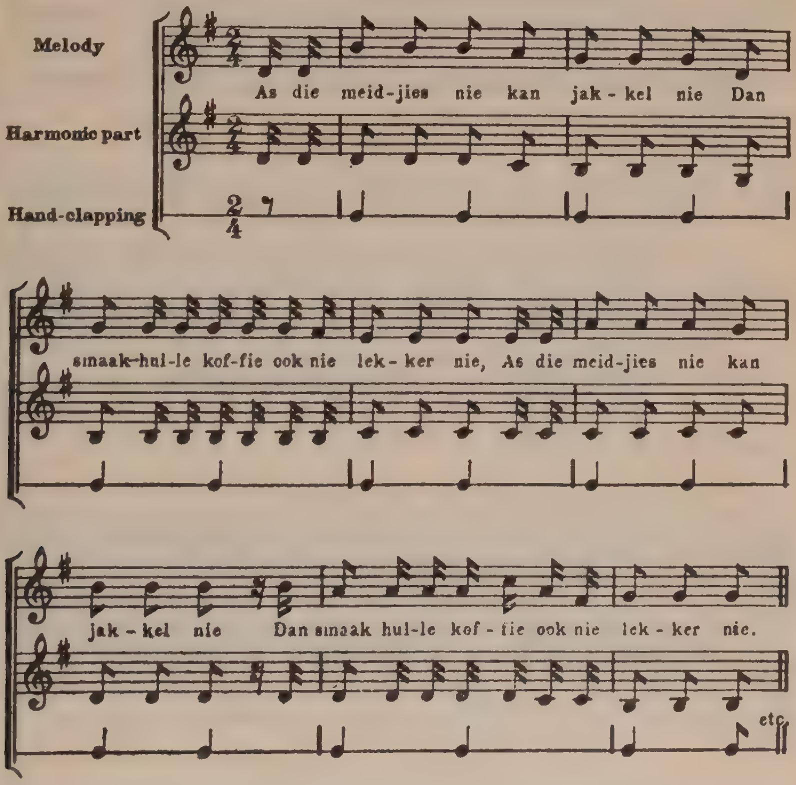
It will be seen that in this song the Bushman girls follow no system in the arrangement of the various sections of the tune ; I shall discuss this more fully later on.

Ex. 37.


♩ = 92
Klein /ganako
The Girls
Hand-clapping
A - Mê, Mê die bokkie, A - Mê, Mê die bokkie, [En]
bokkie is sy naam. Haar lammetjie se naam is Nel-lie, Haar
lammetjie se naam is Nel-lie, Haar lammetjie se naam is Nel-lie, [En]
Nel-lie is sy naam. A - Mê, Mê die bokkie, A - Mê, Mê die
bokkie, A - Mê, Mê die bokkie [En] bokkie is sy naam.
etc.

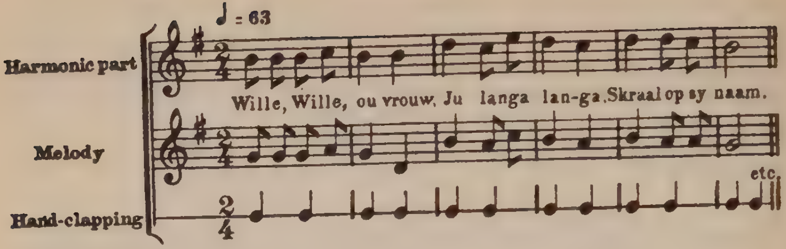
Here again we see that the song was not begun at the beginning, but at the eleventh measure. Moreover until the tune was firmly established the correct notes of the eleventh and twelfth measures were not sung. *Klein |ganaku*, of course, sang with the other girls until they had "found their feet," and then she broke into harmony.

Ex. 38.


Melody
Harmonic part
Hand-clapping
As die meid-jies nie kan jak - kel nie Dan
smaak-hul-le kof-fie ook nie lek - ker nie, As die meid-jies nie kan
jak - kel nie Dan smaak hul-le kof - fie ook nie lek - ker nie.
etc.

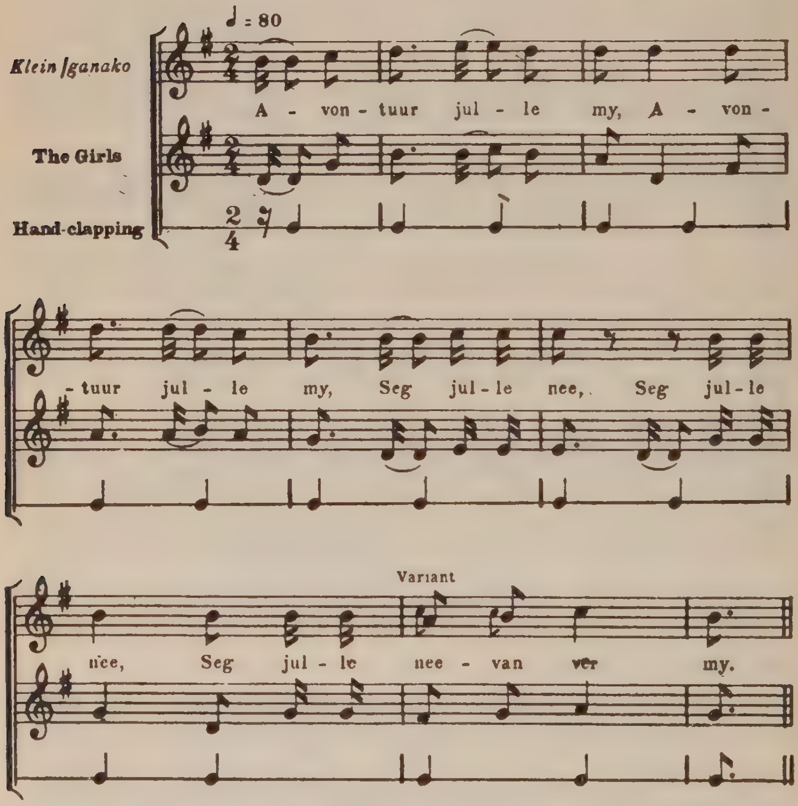
In this song the voices were more evenly divided. The whole was repeated many times without alteration. In this instance the harmony was below the melody.

Ex. 39.



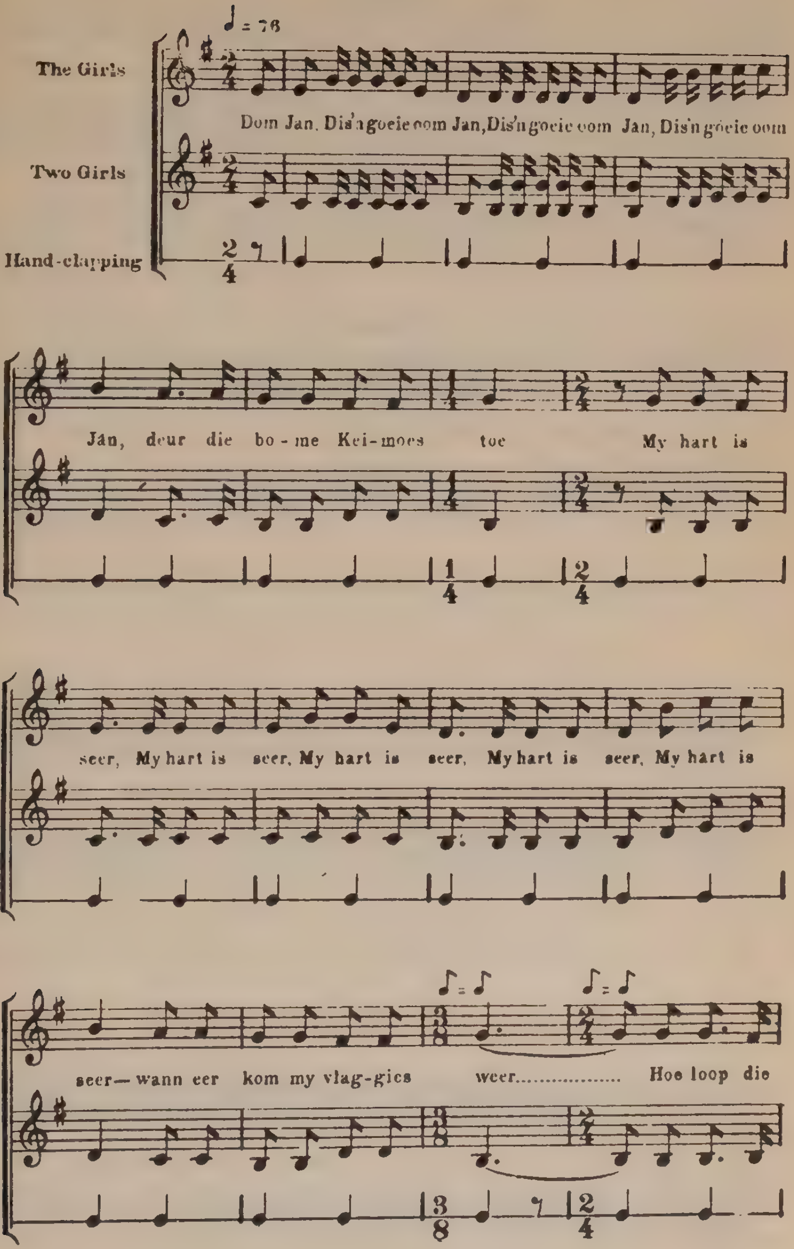
This straightforward little tune calls for no particular comment; it was, of course, repeated again and again.

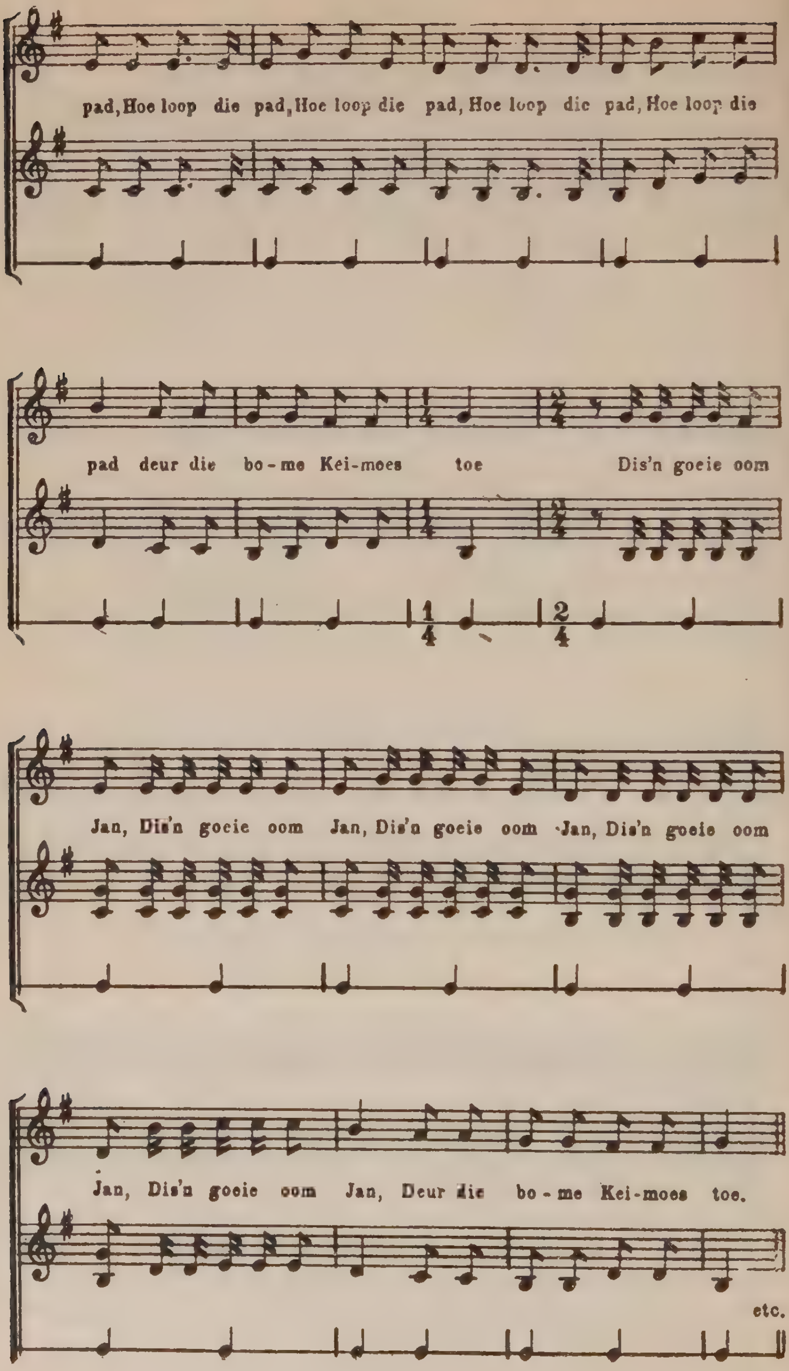
Ex. 40.


♩ = 80
Klein /ganako
A - von - tuur jul - le my, A - von -
The Girls
Hand-clapping
- tuur jul - le my, Seg jul - le nee, Seg jul - le
Variant
nee, Seg jul - le nee - van ver my.

In this tune it is interesting to note the occurrence of the type of syncopation that is commonly found in popular songs of recent times.

Ex. 41.


♩ = 76
The Girls
Two Girls
Hand-clapping
2/4
Dom Jan. Dis'n goeie oom Jan, Dis'n goeie oom Jan, Dis'n goeie oom
Jan, deur die bo-me Kei-moes toe
1/4
2/4
My hart is
seer, My hart is seer, My hart is seer, My hart is seer, My hart is
seer— wann eer kom my vlag-gies weer..................
3/8
Hoe loop die

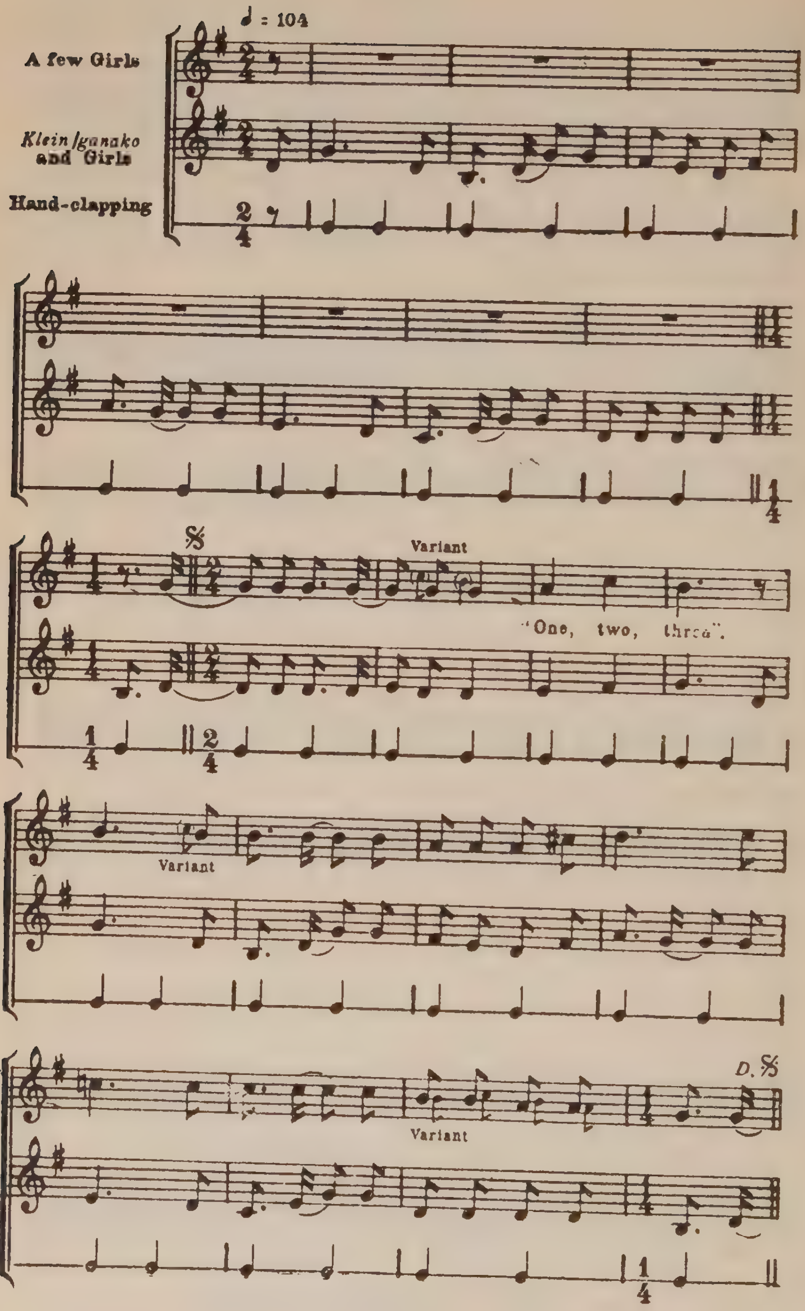

pad, Hoe loop die pad, Hoe loop die pad, Hoe loop dic pad, Hoe loop die
pad deur die bo-me Kei-moes toe Dis'n goeie oom
Jan, Dis'n goeie oom Jan, Dis'n goeie oom Jan, Dis'n goeie oom
Jan, Dis'n goeie oom Jan, Deur die bo-me Kei-moes toe.
etc.

Here again we meet with the fact that the Bushman girls had apparently assimilated only a portion of the tune, for what they sang seems to be the last eight measures of a sixteen measure melody, and the nature of the harmonies used confirms this view. Further, it will be seen that in this song also they began to sing, not at the commencement of the half-melody, but just before its third measure.

The shortening of the cadence-note is also to be remarked, the singers either having failed to observe the sustained note at the end of each verse when they first heard it performed, or at least to realise the necessity for so sustaining it.

In this song I have compressed the harmonic parts on to a single stave. The effect of the complete triads sung by these simple people was very striking.

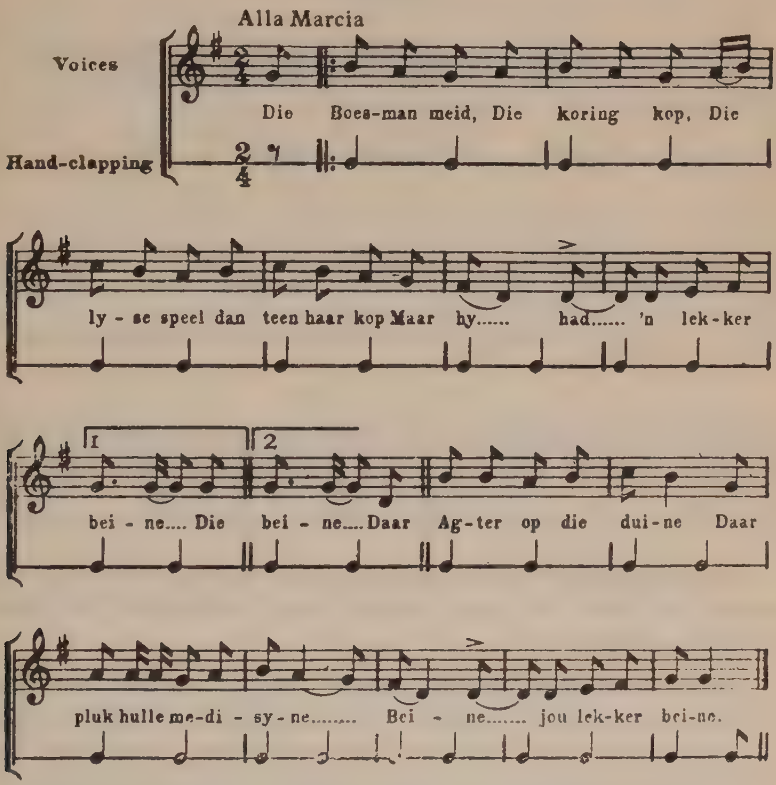
Ex. 42.


𝅗𝅥 = 104
A few Girls
Klein Igganako and Girls
Hand-clapping
Variant
"One, two, three".
Variant
Variant
D. 𝄋

No words, except those forming the title, were secured for this song. The interpolation of these three English words was very curious. Musically, the song is important because in it we see that the girls were able to grasp the principle of elementary modulation.

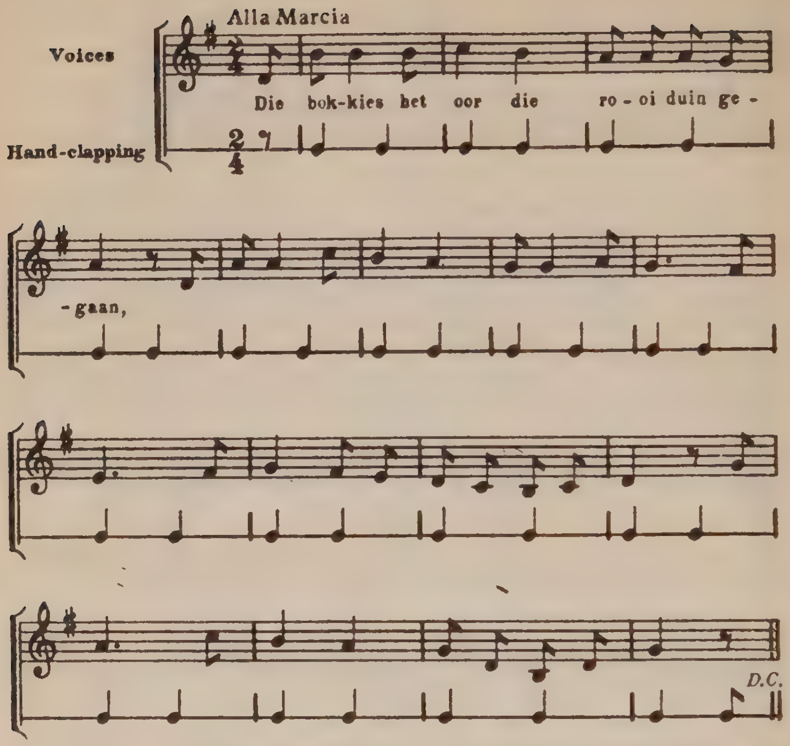
Syncopation is again employed, as in Ex. 40, and also the shortening of the cadence-notes, as in Ex. 41.

Ex. 42.


Alla Marcia
Voices
Hand-clapping
Die Boes-man meid, Die koring kop, Die
ly - se speel dan teen haar kop Maar hy...... had...... 'n lek-ker
1
2
bei - ne.... Die bei - ne.... Daar Ag-ter op die dui-ne Daar
pluk hulle me-di - sy - ne........ Bei - ne........ jou lek-ker bei-ne.

This song was not recorded, but the tune was taken down on the spot and checked there. It was sung without harmony. I had an opportunity of re-checking it in Johannesburg, when the girls sang it again as they did several of the other songs. Once more the shortening of the cadence-notes will be observed.

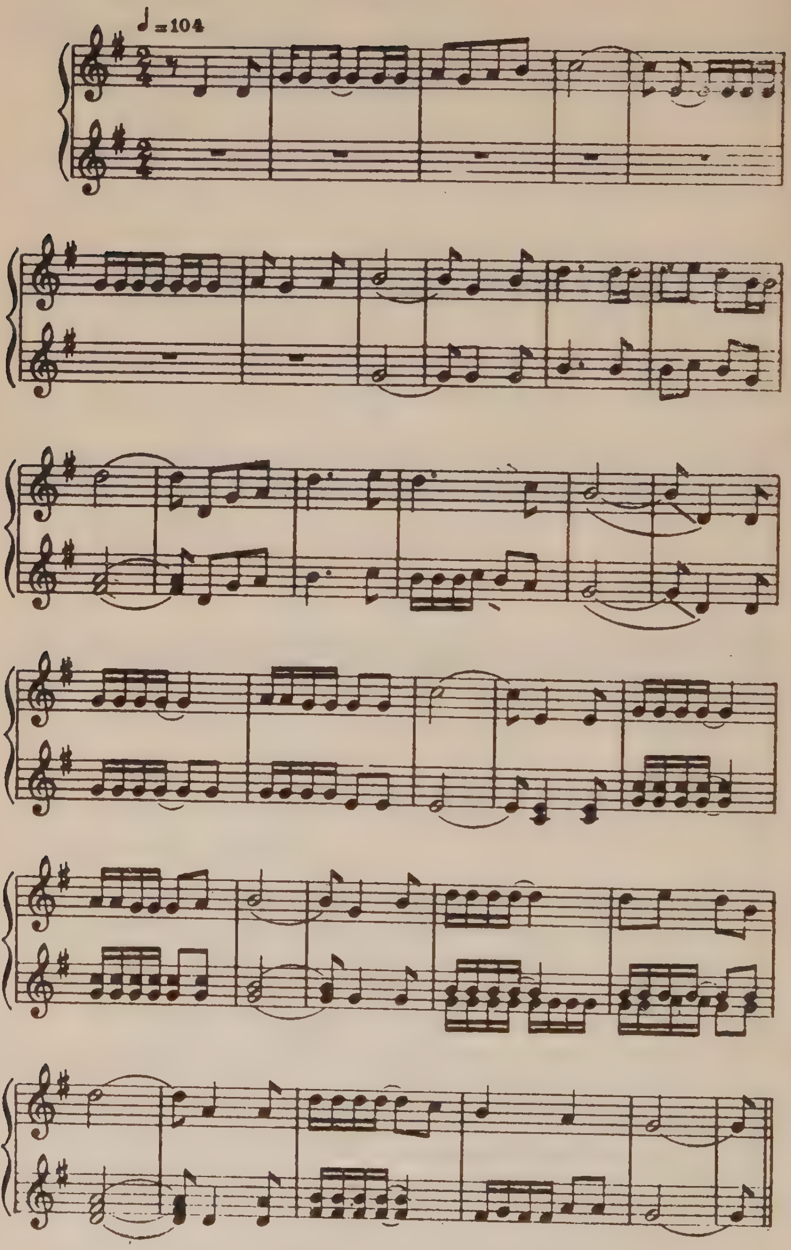
Ex. 43.



As in the case of Ex. 42, this song was noted down in the Kalahari, but not recorded. No words, beyond those forming the title, were secured on that occasion.

Another tune, with the title " Syker Bokkie," was also heard and recorded, and the words obtained. This song presents one of the most curious problems of all. Although the basis of the melody was undoubtedly very simple, it was covered up by a welter of rhythmic additions, which included much syncopation. This involved the interpolation of syllables, apparently without meaning, and verbal repetitions, all of which made detailed noting-down on the spot out of the question, and the accurate transcription from the record almost impossible. The latter was further complicated by the fact that practically every one of the half-dozen girls who took part in the song would, at any moment that suited them, break away from the tune into an extemporised harmonic part. Thus at times the tune would be heard clearly, and at others it would dissolve into a chain of chords from which it was difficult to extract the melody notes proper. Complete triads occurred in several places, though not always at the same point in successive repetitions of the song ; in fact, no two repetitions were alike. A portion of the performance, transcribed as accurately as possible under the circumstances, was as follows :

Ex. 44.



This example gives two repetitions of the tune. The reader will notice that in the fourteenth, fifteenth and sixteenth measures the singers of the upper vocal part abandon the melody, and harmonise it instead; whereas the singers of the lower vocal part abandon their harmonisation, and take over the melody at that point. This procedure was followed throughout the whole song, sometimes in a very complicated way. The elaborate syncopation was also a characteristic feature of this song.

(c) Vocal Imitation of European Musical Instruments.

One of the most remarkable musical experiences which I had in the Kalahari was hearing, at night, the young girls imitating vocally the sound of a European dance band of violin and guitars, such as one may still hear a festive occasions in the remoter farms of South Africa. There was no mistaking the intention of the girls, as, apart from the vivid mimicking of the sounds of the instruments, one or two actually suggested, in pantomime, the movements of the instrumentalists.

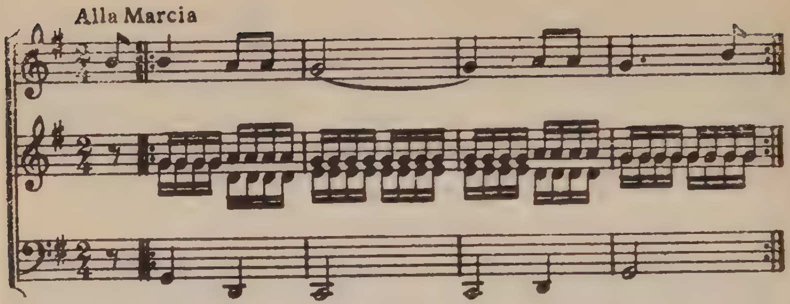
The tone produced by the singers was of a strongly nasal character, and the repeated notes were achieved by the performers flicking their closed lips with the fingers, thus allowing the sound alternately to be heard and cut off.

But the most remarkable feature of the whole performance was the bass part, which was executed, *at the pitch which I have indicated*, by two of the girls. These bass notes were produced, not by the larynx, but by the pharynx; and after a couple of such performances the girls were forced to stop, since the "bass" singers had artificially induced a mild attack of pharyngitis.

I have recently heard that similar vocal imitations of instrumental music of this nature are, or have been, practised by the coloured people of Clanwilliam, in the Cape Province.

Here is a specimen of the music of one of these imitations, noted down, as carefully as possible, in the desert. At times individuals would add a note or two to the harmony as fancy dictated, but the basis was manifestly as I have indicated it.

Ex. 45.



IV. DANCING TO THE GRAMOPHONE, AND TO THE PIANOFORTE.

At sunset, on the evening of Friday, 26th June, a number of the younger girls came to our camp and danced to music played by Mr. Donald Bain's gramophone. None of the girls was over eighteen. Mr. Bain told me that he had been in the habit of playing records at this hour, and gradually the girls began to come down to the camp, ostensibly to draw water from the tanks, but actually to have the opportunity of dancing to the music. On noticing this, Mr. Bain gave them permission to come, being interested in their invention of dance steps. These steps were a type of stamping upon the ground, accompanied by knee-slapping, left and right alternately. See Plates 9 and 10.

The dances which I first saw were executed to music in duple time, the particular record being a Singer Record, No. GE. 233, the tune being called " Tin Town Vastrap." The girls danced easily to this type of tune. It then occurred to me to see how they reacted to music in triple time, and accordingly a record of a waltz, Singer Record No. G.E. 202, was played, the tune being called " Shannon Wals." At first the girls were puzzled, but they gradually applied their duple-time steps to the triple time tune, by throwing the accent alternately upon their right and left feet. *Klein |ganaku*, however, more acute than the others, solved the problem by pausing, during two beats, and stepping the third beat. The remaining girls did not follow her in this ; they were apparently incapable of doing so.

In September, after the arrival of the Bushmen in Johannesburg, where they were to be encamped for the Empire Exhibition, a number of them were taken to the University in order to have their speech and some of their music electrically recorded. During one of the recording sessions, Mr. Harold Samuel, the eminent pianoforte recitalist, was invited by me to come and see the work going on, and after it was finished I suggested that he might play to the Bushmen on the pianoforte. He agreed to do so, and I proposed that he should let them hear the little two part invention in F major of J. S. Bach. This movement is in triple time, and Mr. Samuel had scarcely got into his stride when old Abraham, who was sitting on the floor with the rest, rose from his place and began to dance. He found the same difficulty with the time that the girls had done in the Kalahari, but nevertheless his reaction to the music was instantaneous.

I then asked Mr. Samuel to play a strongly rhythmical dance tune in duple time, and on his doing so, three of the girls leapt to their feet, threw off their blankets, and danced with grace and ease.

These experiments are of particular interest when one remembers that Burchell, in 1812, tried to interest a small Bushman group in lively European music played by him upon his flute, but found in their case no such reaction.[10]

V. MUSICAL TERMS

In addition to the names of musical instruments, I obtained a few "musical terms," my informant being old */ganaku*

/kheika	sing, or to sing
/ˀui	a song, or to sing
/khae !ku	sing it
thã kxˀã	I sing it louder
thã !kon	I sing it still louder
!koi ken !ˀui	clap hands
/koo	to dance

VI. ANALYSIS OF THE MUSIC

(1) *Instrumental* (*indigeneous and acquired*).

An examination of the music played upon the stringed instruments of the Bushmen yields interesting results.

(a) Scales and chords used, and harmonic and polyphonic principles involved.

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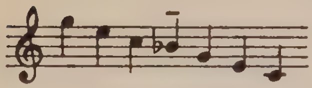
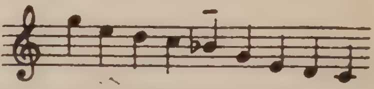
[10] Burchell W. J., *Travels in the Interior of Southern Africa*, London, 1822, vol. i. p. 459.

On the /*khou*, or mouth resonated shooting bow, only one scale can be played, which consists solely of partials of the harmonic series. As this instrument appears to be the earliest type of Bushman stringed instrument, it would seem that the form of the scale of which it is capable is the earliest instrumental scale to be used by them. This theory is supported by the fact that the indigeneous songs of these people are based upon this very scale. The scale exists in two forms, that which contains harmonic sounds up to No. 7 of the series, and that which includes No. 9 also. In the latter case No. 9, transposed an octave, bridges the gap between Nos. 4 and 5 of the series. The two forms of the scale are, respectively,

Ex. 46.

(i)  and 2) 

the latter being pentatonic in character. Both forms may be seen in use in the indigeneous songs.

The harmonic intervals possible on this type of /*khou* are the major 2nd, major 3rd, perfect 5th, major (i.e. harmonic) 7th, and the octave. Inversions cannot occur, since the fundamental is always present. This applies to the music played upon all Bushman stringed instruments, and indeed to all simple musical instruments derived from shooting bows which are played in similar manner.

The melodic intervals used on this instrument are the major 2nd, minor 3rd, major 3rd, perfect 4th, diminished 5th, perfect 5th, minor 6th, major 7th and octave. That is to say, any interval possible upon the instrument may be, and is, succeeded by any other. Since the fundamental is present all the time, and is never altered in pitch, it acts throughout as a " pedal-point " or drone. May one therefore suggest that in the music of the shooting bow in the distant past one may find the origin of the earliest pentatonic scale (before the days of mathematics or even of simple measurement), and also of the principle of the tonic or drone ?

On the /*khou*, or shooting bow with tin resonator, the scales used seem at first sight to be rather erratic. But the harmonic intervals that are elicited from the instrument are, in spite of the fact that more than one fundamental is used in each tune, even simpler than those of the instrument last described. They are the major 3rd, perfect 5th and octave.

The melodic intervals used in the tunes which I have heard played upon this form of /*khou* are the minor 2nd, major 2nd, minor 3rd, major 3rd, perfect 4th, perfect 5th and major 6th. But the less usual intervals, such as the minor 2nd and the major 6th, are rarely used, and, in fact, the instrument is harmonic rather than melodic in character.

The principles which govern the progression of the parts are, however, controlled by physical law. I have already dealt with these in detail elsewhere,[11] and need not repeat them in this study; but I would repeat that they furnish an excellent explanation of many of the phenomena of early European harmony and polyphony, for the existence of which no tenable theories have hitherto been vouchsafed.

On the /*khou*, or modified shooting bow with skin or tin resonator, the only harmonic intervals used are the perfect 5th and the octave.

The melodic intervals are no less restricted, consisting as they do of the major 2nd, minor 3rd and major 3rd. But it is quite possible that other tunes played upon this instrument might yield other melodic intervals, as in the case of its prototypes the Hottentot *khas* and the Tswana *nokukwane*. This instrument, like the previous one, is harmonic rather than melodic in character.

(b) Form.

I was unable to discover any particular form in the music executed upon the mouth-resonated /*khou*, although I have little doubt but that single repeated musical phrases or sentences, such as are played upon the other types of stringed instruments, and which are also characteristic of the songs, are also in use. The music played upon the tin-resonated /*khou* was, however, relatively clear-cut and capable of explanation. In every instance the tunes consisted of two measures which balanced each other. But the reason for the balance is curious; the technique of the instrument determines it. Each of the two measures of the tune is fingered in a particular manner, and the first of the two is either the same as the second, or is opposed to it. A tabular analysis will make the point clear.

---

[11] Kirby, P. R., "The Recognition and Practical use of the Harmonics of Stretched Strings by the Bantu of South Africa," in *Bantu Studies*, Johannesburg, 1932, Vol. vi, No. 1, p. 31 et seq., and

Kirby, P. R., *The Musical Instruments of the Native Races of South Africa*, London, 1934, pp. 241-242.

Ex. 47.

		First measure	*Second measure*	*Similar or opposed*
Ex.	11	○ ○ ○ ○ ● ○	● ● ● ● ○ ●	opposed
	12	○ ○ ○ ● ● ●	○ ○ ○ ● ● ●	similar
	13	○ ○ ○ ○ ● ○	● ● ● ● ○ ●	opposed
	14	○ ○ ○ ○ ● ○	● ● ● ● ○ ●	opposed
	15	○ ○ ○ ○ ● ●	○ ○ ○ ○ ● ●	similar
	16	○ ○ ○ ○ ● ○	● ● ● ● ○ ●	opposed

o 1st fundamental (string open) ● 2nd fundamental (string stopped by fingers).

An occasional " wrong note " (i.e. a different harmonic from that which the player intended) will not therefore spoil the design.

In the case of the modified */khou*, with skin or tin resonator, the same principle holds, though the formal design is occasionally greater in extent.

Ex. 48.

	1st measure	*2nd measure*	*3rd measure*	*4th measure*	
Ex. 18	○○○○●	○○○○●	○○○○●	○○●○○●	opposed
	○○○○●	●●●	○○○○●	●●●	opposed
20-21	○○○○●○	●●●●○●			opposed

o 1st fundamental (string open) ● 2nd fundamental (string stopped by chin).

But if we examine the harmonic technique of this instrument, which is controlled by fingering, we shall see that it is regulated by similar principles of design.

Ex. 49.

	1st measure	*2nd measure*	*3rd measure*	*4th measure*
Ex. 18 :	○○○○○	○●●●○	○○○○○	○○●●●○
19	●●●●○	○●○	●●●●●	○●○
20-21	○○○○●○	●●●●○●		

o fundamental sounds ● harmonic sounds.

In Exx. 18 and 19 we find that we have a " four line rhyming stanza," and in Exx. 20 and 21 two opposed measures which, when repeated, give us a similar structure.

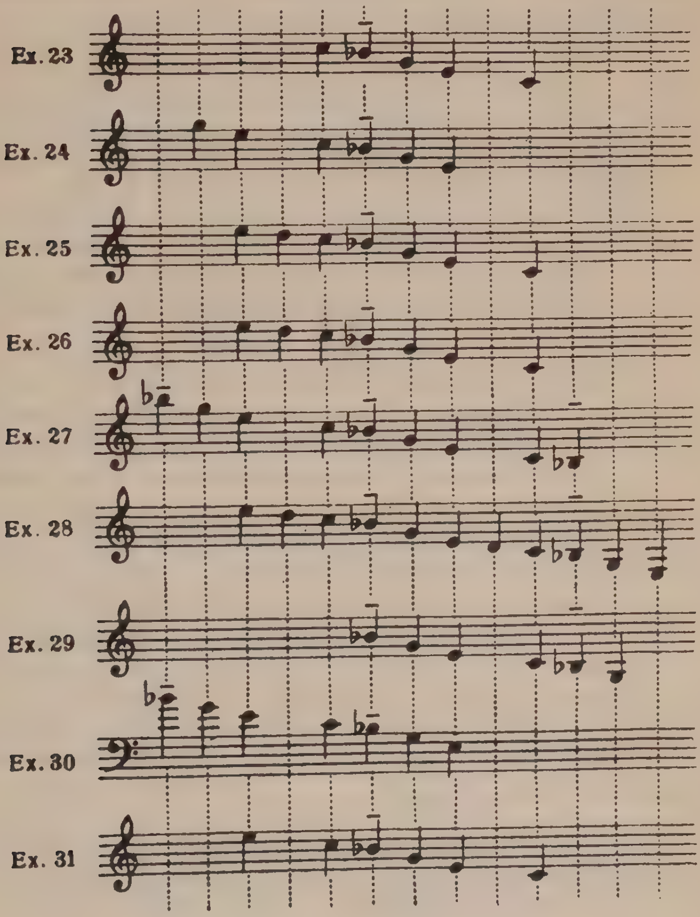
Music of this nature, therefore, would appear to be the result of patterns produced by the repetition of an idea brought about by fingering, or by the alternation of such an idea with its opposite.

(2) *Vocal Music* (*indigeneous*)

(a) Scales and chords used, and harmonic and polyphonic principles involved.

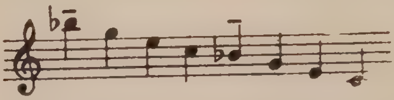
The following is a tabulation of the scales used in the examples of indigeneous song which I have quoted, transposed to the same key (with C as " tonic " or fundamental) for convenience of comparison.

Ex. 50.



Examples 23, 24, 27, 29, 30 and 31 display the simpler, and doubtless older, form of scale, a vocal imitation of the corresponding scale derived from the harmonic sounds yielded by the regular shooting bow when used for musical purposes. In this scale

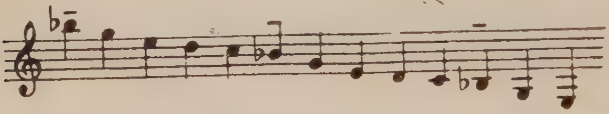
Ex. 51.



only harmonics up to the 7th partial of the series are used, the octave and the unison being regarded as one and the same.

Examples 25. 26 and 28 show the addition of the 9th partial, and the resulting scale is pentatonic.

Ex. 52.



The link between the two forms will be seen in the fact that in certain of the songs, Exx. 25 and 26, the 9th partial occurs in one position only, while in one instance, Ex. 28, it appears in addition transposed to the octave below.

In the songs the main principle of harmonic and polyphonic progression, in the case of songs based upon the simpler scale, would appear to be that any two sounds of that simpler scale may be sounded simultaneously, since all are partials of a single fundamental. This principle permits the *extempore* ornamentation to which I have previously referred and also the combination of the parts sung by the different performers; such combination can never sound inharmonious. But in the case of the more advanced scale it would seem that the 9th partial is not sounded in combination with the 8th or 10th (the latter being the octave transposition of the 3rd). This would appear to indicate that the Bushmen had begun to differentiate between " concordant " and " discordant " intervals; or, in other words, to distinguish between the value of the lower as opposed to the higher partials of the harmonic series for purposes of rudimentary harmony and polyphony.

I admit that this suggestion is merely tentative, and I would not consider it as established unless I could examine many more songs of this nature and find that it held throughout. But I would point out that the traveller Lichtenstein, in describing and noting down some Hottentot music which he heard in 1803, tells how he heard the first of these scales in use on their national instrument, the *gora*, but added significantly "It deserves to be remarked in passing that these intervals are not peculiar to this instrument alone, but are also characteristic of the vocal music of each of the African savages."[12]

(b) Form.

The form of the indigeneous songs is simple. It consists generally of a single musical phrase, or, more rarely, a sentence, either repeated again and again, or alternating with a variant of itself. Such alternation would, as I have already suggested, appear to be fortuitous ; but the principle of alternation of ideas is manifest, though not organised to any great extent.

As we have seen, the musical phrase appears to be of the usual form, and it may be either normal, of four measures (Exx. 25, 26, 27, 28 and 31), or expanded, of six measures (Exx. 23, 24 and 29). The subdivision of the latter type of phrase is sometimes into two sections of three measures each (Ex. 23), and at others into three of two measures (Ex. 24).

Triple time would appear to be more frequent than duple in indigeneous song, or perhaps duple time with the beats triply subdivided. The reverse is the case in the European songs adopted by the young people, who, however, find little difficulty in imitating them.

In many songs the phrase was repeated again and again, such variation as was desired being achieved by the ornamental yodelling of some of the singers ; in others variants of the original phrase would be sung by the main group of performers in order to secure variety. The starting of songs was undertaken by a "leader" or "precentor."

No modulation occurs in Bushman song. It is quite impossible, since the mode or scale is derived exclusively from the harmonic series. Transposition (i.e. alteration in general pitch), is common, since the singers begin a song upon any note that suits both performers and melody, the *tessitura* of different songs varying considerably.

Simple syncopation occurs both in the voice parts and in the hand-clapping accompaniments. Sometimes a syncopated rhythm is deliberately opposed to the main rhythm of a song, either in the voice parts, the hand-clapping, or both.

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[12] Lichtenstein, H., *Reisen in Südlichen Africa*, Berlin, 1812, Vol. ii, pp 379-80. The passage in question, in a revised translation, appears in Kirby, P. R., *The Musical Instruments of the Native Races of South Africa*, London, 1934, p. 175.

(3) *Vocal Music* (*acquired*).

(a) Scales and chords used, and harmonic and polyphonic principles involved.

Since the music imitated was of European origin (probably even in the case of the Hottentot songs), the scales and chords used in it were European in character.

The harmony employed was of the simplest type, consisting of diatonic chords, generally in root position, though an occasional first inversion would appear. The cadences were normal for the most part. In one instance modulation was attempted, at the point where it had occurred in the original tune, with considerable success.

Only the girls sang these songs, and consequently when they imitated the parts usually performed by men the harmony would often be inverted, sometimes with ludicrous results, or a part might be doubled at the octave thus appearing simultaneously above and below the melody.

Thirds and sixths, proceeding in parallel with the tune, were very frequent, as they are in untutored European musical circles ; and when more enterprising part-singing was attempted the movement of the parts contained breaches of the principles of part-progression of the same kind and frequency as is found in European music of the lower types.

(b) Form.

The form of the songs was naturally derived from that of the originals ; but, unless the tunes were short, it was not fully comprehended by the Bushmen, since they tended to begin them at any point, and also to confuse the order of the phrases. They also " clipped " the cadences, as one might expect, since the sustaining of the note set to the final syllable of a verbal phrase or sentence is artificial and conventional, and infrequently found in the songs of the simplest peoples.

The syncopation of the melodies which has been noted in several instances reveals the fact that the current popular idiom has affected even those Europeans living in the outlying districts whence these songs were acquired. Doubtless the ubiquitous gramophone has been primarily responsible for this.

VII. SUMMARY OF CONCLUSIONS

1. The musical instruments of these Bushmen have all been naturally developed from articles which to them are necessaries of life, such as cocoons, hides, fruits, the shooting bow and the like.

2. The stringed instruments possess the greatest musical possibilities, and from them the Bushmen have learned to recognise and to use certain partials of the harmonic series.

3. These partials, heard in succession, form two types of scale or mode, one consisting of partials up to, and including, No. 7 of the series, the other up to, and including, No. 9. Beyond this the Bushmen do not appear to have gone. Their indigeneous music, both vocal and instrumental, appears to be based upon these scales.

4. The form of their instrumental music is limited to a single musical phrase, or sentence, repeated again and again, although sometimes variants are used by way of contrast. Such variants would seem to have arisen from the opposition of fingering patterns.

5. The indigeneous songs are of a simple type, though at first they sound quite complex to an European ear. The extent of the form is a single musical phrase, or sentence, repeated again and again, although sometimes variants are used by way of contrast. Such variation is apparently little organised. All tunes, however, are based upon tune patterns, and frequently elaborated by individual free added parts consisting of yodelling.

6. Triple time, or perhaps duple time triply subdivided, appears to be preferred to duple time not so subdivided.

7. Tone production tends to be harsh, as is to be expected in the open air, and most of the singing involves the use of the yodel. Group singing occurs more frequently than solo song.

8. Since the stern necessities of life have caused these Bushmen to develop the art of mimicry to an exceptional degree, their women, who have possibly had more time or opportunity than the men, have succeeded in picking up a number of European songs, in which they have imitated the European scale and system of harmony. The fact that their own music involves the recognition and use of the harmonic chord has facilitated this.

9. Such imitation would appear to be practised as mere mimicry, since it does not seem to have influenced their original music in any way, even in the case of the younger people.

10. The indigeneous musical art of these Bushmen would appear to be largely, if not wholly, *extempore*.

VIII. TEXTS OF THE SONGS WITH AFRIKAANS WORDS, WITH TRANSLATIONS[13]

Ex. 36. So lank soos die lepel in die jampot staan,
Roer, Maria, roer !
Ek swaai haar hier, en ek swaai haar daar,
En ek swaai haar oor die see.

As long as the spoon remains in the jam pot,
Stir, Maria, stir !
I swing her here, I swing her there,
And I swing her over the sea.

Ex. 37. A-Mê, Mê die bokkie,
Bokkie is sy naam.
Haar lammetjie se naam is Nellie,
Nellie is haar naam.

Baa, baa, the little goat ;
Little goat is her name.
Her little kid's name is Nellie ;
Nellie is her name.

Ex. 38. As die meidjies nie kan jakkel nie,
Dan smaak hulle koffie ook nie lekker nie.

If the little (kitchen-) maids haven't got something to gossip about, their coffee won't taste good.

Ex. 39. Wille, Wille, ou vrou,
Ju langa langa,
Skraal op sy naam.

Wille, Wille, old woman
You're very, very long,
You're really very thin ?

Ex. 40. Avontuur julle my,[14]
Seg julle nee—van ver my.[15]

Why do you insult me ?
Why do you say nothing—leaving me alone.

---

[13] The texts were obtained by Professor I. D. McCrone, who also translated them. Both texts and translations have been examined by Professor C. M. van den Heever. To both these colleagues I am deeply indebted for their assistance.

[14] The words are very corrupt and the meaning obscure. The translation is conjectural.

[15] Here also the words are corrupt, and the translation therefore conjectural.

Ex. 41. Hoe loop die pad deur die bome Keimoes-toe ?
My hart is seer ; wanneer my vlaggies weer ?
Dis 'n goeie oom Jan.—deur die bome Keimoes-toe.

How runs the road through the trees to Keimoes ?
My heart is sore ; when shall I get another drink ?[16]
He is kind, Uncle John—through the trees to Keimoes.

Ex. 42. Die Boesman meid—die koring kop—,
Die lyse speel daar teen haar kop,
Maar hy had 'n lekker bene.
Daar agter op die duine,
Daar pluk hulle medisyne,
Bene, jou lekker bene.
My ma het gesê ek kan jou kry,
Eet jou goed soos lekker goed.

The Bushman girl with " pepper corn " head,
The lice are playing in her hair,
But she has lovely legs.
There, away on the dunes, they are "gathering medicine."
Legs, you lovely legs !
My mother says that I can have you,
"Gather ye rosebuds while ye may."[17]

Ex. 43. Die bokkies het oor die rooi duin gegaan.

The little goats went over the red dune.

Ex. 44. Syker-bokkie laat ons waai
Ver ! ver oor die berg.

Little sweetheart, let us hie
Far, far over the mountain.

---

[16] An unknown idiom is used here. Probably the old man, a Hottentot, has gone off to try to get liquor for his wife. Keimoes is an old Korana stronghold near Upington.

[17] Herrick's line seemed to sum up the sense of the little lyric better than any literal translation could.

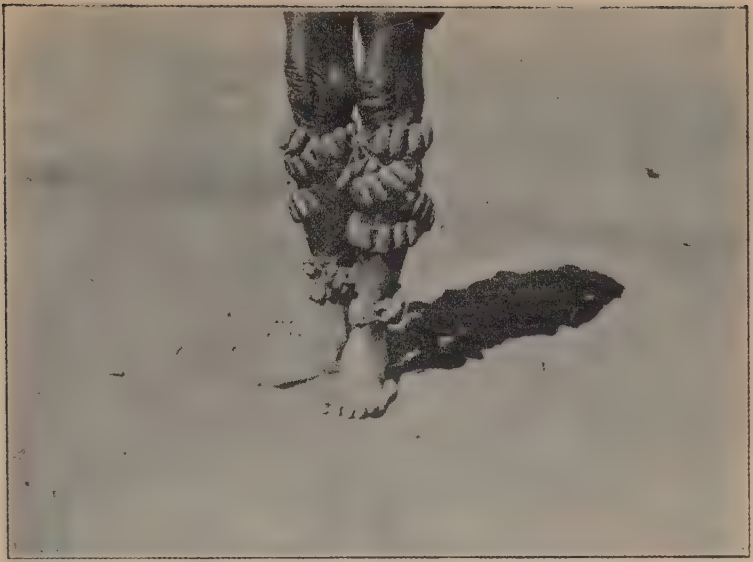

Plate 1. Ankle Rattles

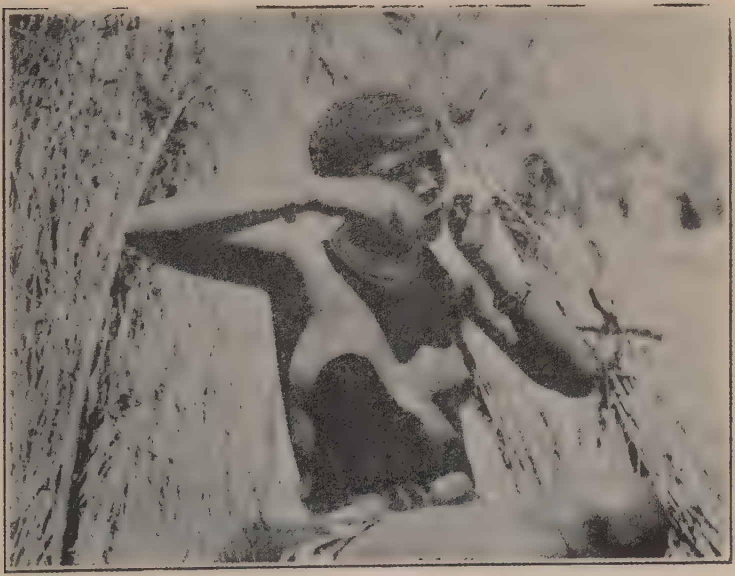

Plate 2. Playing "jews' harp" of grass

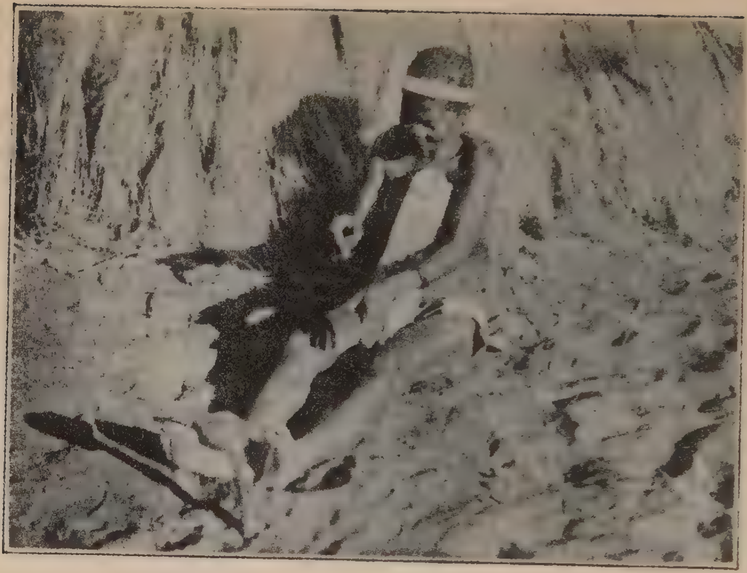

Plate 3. Woman playing |ka|kanasi

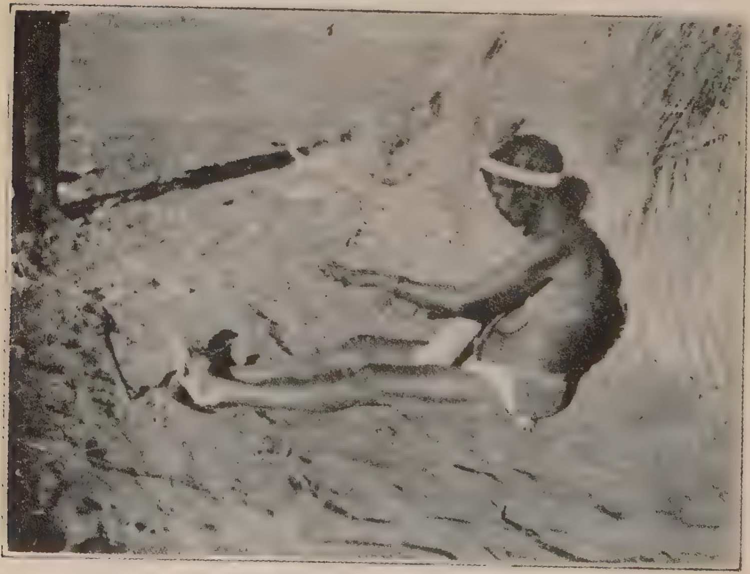

Plate 4. Another view of above

Plate 5. Playing the Ocarina

Plate 6. Playing the |khou with resonator

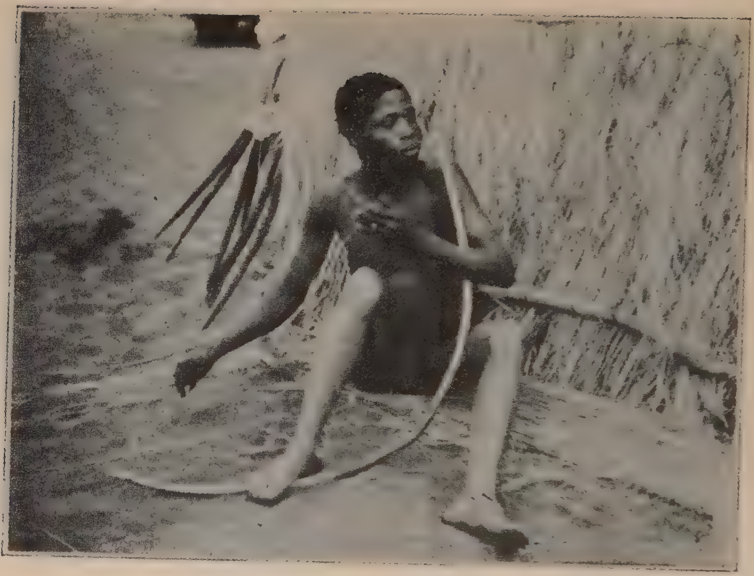

Plate 7. Playing the |khou

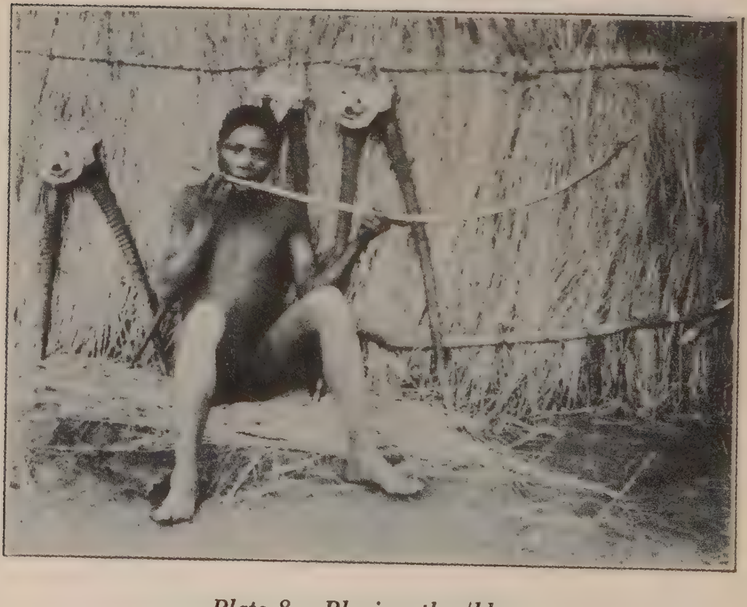

Plate 8. Playing the |khou

Plate 9. Girls dancing to gramophone
(from cine camera)

Plate 10. Girls dancing to the gramophone
(from cine camera)

AN OUTLINE OF *≠KHOMANI* BUSHMAN PHONETICS

By C. M. DOKE

The phonetics of this section of the Southern Bushmen closely resembles in general features that of the *ʻ!khũ*, a tribe of Northern Bushmen, whom I studied in 1925.[1] The basis of most words is monosyllabic, tone occurs but not stress, and the range of tones seems to be the same as with *ʻ!khũ*. As with *ʻ!khũ*, so with *≠khomani* all syllables end with vowels or nasal consonants. The vast majority of words commence with a click, the quick succession of which in speech is an outstanding feature of all the Bushman languages. While *≠khomani* is an isolating language it nevertheless employs certain formatives, such as prefixal *ka-*, suffixal *-si* and *-ce*, and sentence formatives such as *he*, *ca*, *ku* and the pronouns. It is important to notice that these, without exception, are devoid of clicks. Is it that they are a later development due to outside non-Bushman influence ? There are many more of these in *≠komani* than in *ʻ!khũ*.

The Sound Divisions of ≠khomani

≠khomani sounds are naturally divided into the two main divisions of vowels and consonants, but the latter are sub-divided into emitted consonants and click consonants. Emitted consonants are those in the production of which the whole movement of the speech organs emits or drives the air outwards. In the case of the click consonants the rarefaction produced causes at least a momentary inrush of air.

In each of these three divisions another important feature of Bushman phonetics is exemplified, the indefiniteness and variability of the sounds. With the vowels it is most noticeable how wide the phoneme range is, for instance the phoneme represented by *ə*, varies from *ə* to *ɑ* to *a*, and similar variations occur with other vowel phonemes. In the case of the emitted consonants, it will be seen that *b*, *p* and *v* are varieties, as are *k* and *c*. In the case of the clicks there is also confusing variety, voiced forms and ejective forms each at times being substituted for the plain velar releases.

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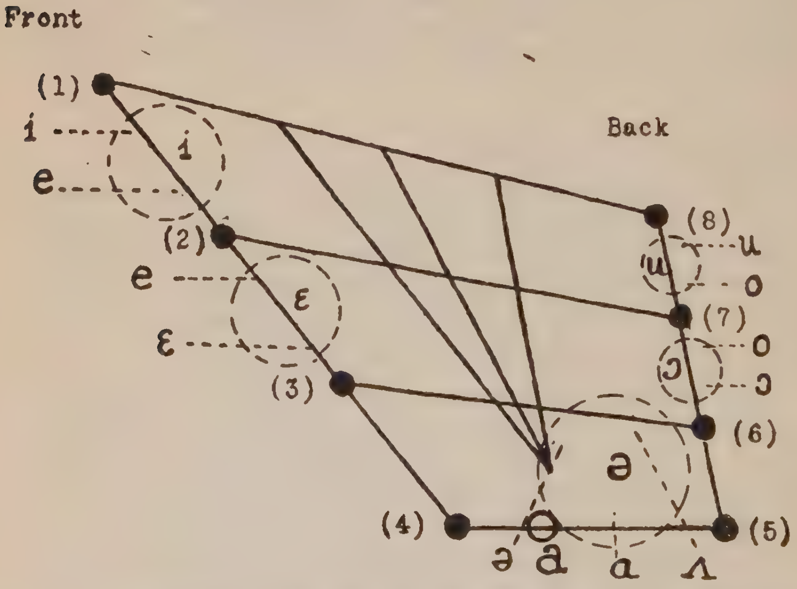
[1] Cf. "An Outline of the Phonetics of the Language of the *ʗhũ̬* : Bushmen of North-west Kalahari," *Bantu Studies*, Vol. II, pp. 129-165.

The Symbols Employed

The symbols of the International Phonetic Association have been used as a basis for this work and for the vocabulary.[2] Departure has been made in the case of the representation of the clicks, in which the symbols of Dr. W. H. I. Bleek (still current in the main in Nama Hottentot, and used in Miss D. F. Bleek's edition of Bushman texts) have been employed, and modified with I.P.A. symbols for aspiration, ejection, voicing, etc. A special moveable symbol has been employed to indicate the pharyngal and epiglottal modification of pressed vowels. Certain moveable symbols have been used before the syllables concerned to indicate tone. Long vowels have been indicated either by doubling or using diphthongs as the case may be.

I. The Vowels

The following chart gives approximately the position of the *≠khomani* phoneme zones for the vowels, in comparison with the positions of the eight cardinal vowels, as used by the International Phonetic Association.[3]



The i- phoneme : This may be described as the front close vowel phoneme, and is variously heard with different speakers, and with the same speaker on different occasions as *i* (front close) or as *e* (front half-close). This vowel occurs short. When long two phonemes are found, viz. *ii*, and *ei*, diphthongs.

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[2] To be published later.

[3] For a description of the eight cardinal vowels and the cardinal vowel chart, see Daniel Jones, *An Outline of English Phonetics*, 3rd edition, pp. 31 *et seq.*

Examples :

Suffix *-ce*, *-ke*, or *-ci*

kaᵇiˀi	(cold)
|keici	(girl)
¯≠ˀi	(red)
ki¯ja, ke¯ja	(yes)
tsˀii	(bite)

The ɛ- phoneme : This may be described as the front mid vowel phoneme, and is variously heard as *e* (front half-close) or as *ɛ* (front half open). As far as recorded this vowel only occurs short, and generally final.

Examples :

|kəᵇe	(field rat)
≠ŋebe	(fish)
||ˀeicɛ	(buchu)
|ˀuuŋkɛ	(shell of tsamma)
≠koʻwɛ	(wind)

The a- phoneme : This is the low vowel, and in *≠khomani* is distinctly a front vowel, being much nearer in tongue position to cardinal 4 than to cardinal 5. Examples of this vowel occur both long and short :

naˋsou	(I sit)
⊙ˀunna	(sleep)
naˋca	(I lie down)
¯haaˀi	(warm)
⊙kun!kaˀa	(to dream)
≠khwaa	(speak)
||ˀaa	(night)

The ə- phoneme : This may be described as the low-central phoneme, and is variously heard as *ə* (neutral), *ɑ* (low back lax) or *a* (low back).

|kən	(a proper name)
tsˀa¯xɑm or *tsˀa¯xɑm*	(eye)
!ŋɑnsi or *!ŋɑnsi*	(koggelmander)
!kɑn	(riempie)
|ˀɑn	(tinder box)
¯≠gɑm	(hit)
|kəᵇe	(field rat).

Dr. Pienaar detected *//kaˉku* using a rounded vowel here.

The ɔ- phoneme : This may be described as the back mid vowel phoneme, and is variously heard as ɔ (back half-open) or as *o* (back half-close). As far as recorded this vowel only occurs short.

Examples :

kɔƙɔ	(jackal)
/kxˀɔke	(bee)
⊙koke	(branches)
//koˉƙu	(pebble)
ˉ≠ˀɔˉƙɔ	(moon)
//ˀɔˀoˉke	(smoke)

The u- phoneme : This may be described as the back close vowel phoneme, and is variously heard as *u* (back close) or as *o* (back half-close). This vowel occurs short. When long two phonemes are found viz. *uu*, *ou*, diphthongs.

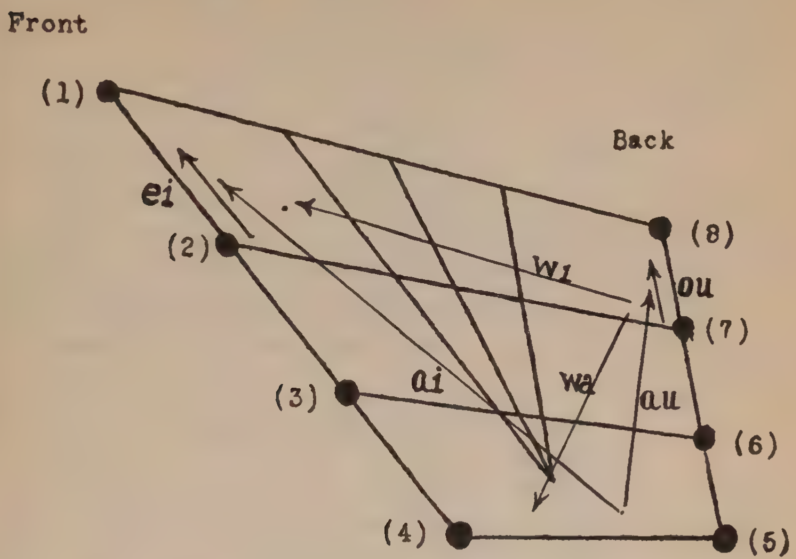
/ˀuba or */ˀoba*	(child)
≠ˀun	(steenbok)
tsˀuƙu_ke	(mouse)
/kaƙoˉsi	(geelbos)
!ˀoma or *!ˀuma*	(plat witgat boom)
ˉ≠kou	(tsamma)
!kou	(hole)
≠ŋuˉƙi or *≠ŋoˉƙi*	(shrew mouse)
/kuu	(tobacco)

The vowel phonemes may be summed up as follows :

(Short)	(Long)
i (*i*, *e*)	*ii*, *ei*
ϵ (*e*, *ϵ*)	
a	*aa*
ə (*ə*, *ɑ*, *a*)	
ɔ (*o*, *ɔ*)	
u (*u*, *o*)	*uu*, *ou*.

Diphthongs

The Diphthongs in *≠khomani* are of an extremely indefinite character : in the main they are of the falling type, i.e. having the first element the more prominent, as in the case of *ei* and *ou* already recorded : there are also certain rising diphthongs in which the second element, though indefinite, is decidedly the more prominent element. *≠khomani* diphthongs are always long. The following chart illustrates typical positions for these diphthongs.



(a) *Falling Diphthongs*

ei. This is one of the exemplifications of the lengthening of the *i*-phoneme, being in reality a lengthening of *e*. During the enunciation of the long vowel, the tongue position moves from an initial position near cardinal 2 towards that of cardinal 1.

Examples :

≠khei	(duiker)
cxei	(excrete)
≠kei_ce	(sing)
!go^{ɜ}*ʔei*^{ɜ}	(sand tortoise)

ou. This is one of the exemplifications of the lengthening of the *u*-phoneme, being in reality a lengthening of *o*. During the enunciation of this long vowel, the tongue moves from an initial position near cardinal 7 towards that of cardinal 8.

Examples :

!kou	(hole)
¯≠kou	(tsamma)
!gou	(striped hyena)
≠khou	(south wind)

ai. The starting point of this diphthong is within the area of the *ə*- phoneme, but distinctly *a*, nearer to cardinal 5 than cardinal 4, and distinct from *a*. The destination is indefinite but towards the area of the *i*- phoneme.

Examples :

!kai	(gemsbok)
!khai	(ostrich hen)
haixa	(Molopo River)
//ˀai¯/ŋ	(arrow)
!kaiˀa	(on top)

au. This is similar in formation to the previous, starting from relatively near to cardinal 5 and making for the area of the *u*- phoneme.

Examples :

/ˀauni	(member of */ˀauni* tribe)
//kau¯si	(driedoring bos)
≠kau	(honey)
xauka	(confluence)
!kau	(under grindstone)

Rising Diphthongs

There seem to be two phonemes of this type each represented by several variants.

wi. Of the first I have recorded *wi*, *we*, *oi*, *oe*, and even *ɔe*. Probably *wi* would be the best orthographic representation for these, though I am not perfectly certain that they all belong to the same phoneme. The second element *e* or *i* (in the *i*- phoneme) is the more prominent, while the start is suggestive variously of *u*, *o* or even *ɔ* : the use of *w* would be non-committal in this connection.

Examples :

-//ŋ !kwi	(Bushman)
!koice	(puff adder)
≠ko'we	(wind)
⊙*koe* or ⊙*koi*	(meat)
!ŋoiˀ	(sinew)

wa. Of the second I have recorded *wa* and *oa*, and this is probably best represented by the former digraph. The destination of this seems to be in the region of the *a*- phoneme.

Examples :

ʘŋwa	(wild cat)
¯tshu //goa	(God)
mʘkwaxai	(my daughter)
!koa¯si	(smell)
!goa	(build)

Triphthongs

Two sound combinations may be regarded as triphthongs in *≠khomani*, viz. *wei* and *wai ;* alternatively they may be regarded as diphthongs following the semi-vowel. I did not record the first element with any other value than that of *w*- Examples :

//ʔwaice	(stars)
!kweike	(lion)

Nasalization of Vowels

In *≠khomani*, as in *ʹ!khũ*, all vowels and diphthongs are susceptible of nasalization ; but here again there seems to be a very happy-go-lucky choice possible—an alternative often being to follow the vowel by a nasal consonant, preferable *n* or *ŋ ;* for instance *kã*- or *kan*- for the prefix ; and some speakers will at times omit the nasalization altogether, thus we have *ka*-. I also recorded *!ŋoiɬ* and *!ŋõiɬ* as variant pronunciation of the word for sinew. I can only conclude from this that while nasalization is a definite feature of *≠khomani* phonetics, it is not always of semantic significance, and probably tone is really more important for the determination of vowel values.

Examples of nasalized vowels ;

!ʔoũ	(dassie)
simĩsi	(whip snake)
≠kaũ	(koodoo)
≠ŋwã	(meerkat)
/ŋũsi	(white man)
ɟõ	(skin)
¯/kxʔeĩ¯si	(beads)

(Nasalization of vowels is marked by the tilde ˜)

Pressed Vowels, or Vowels with Pharyngal Roughening

A feature of the pronunciation of the vowels in certain *≠khomani* words is a considerable voiced friction in the throat. Dr. W. H. I. Bleek merely called this " a rough deep pronunciation."[4] The effect is, however, caused by a contraction and narrowing of the pharynx which make the epiglottis vibrate roughly. The tongue-positions of the vowels remain the same as with the unaffected forms. This feature has been recorded in certain Bantu languages in the extra-grammatical phonetics of onomatopoeia, as for instance in Zulu[5] and Lamba,[6] where the vowels have been described as having " epiglottal friction." I indicate this feature of pressed vowels by the symbol (ᶾ) succeeding the affected vowel. This pressure is commonly, though not essentially, accompanied by a mid or low tone.

Examples :

_!gaaᶾ	(camel)
|gā̃ᶾ	(wide straat)
|kᶾɔkʰɔ̄̃	(to dance)
!gaiᶾsi	(hail)
¯na sũᶾwa	(I blow the nose)
!ŋɦaᶾ	(lynx)
!ŋoiᶾ	(sinew)
kaŋkaᶾmu¯si	(leaf)

Tone

Tone, the musical modulation of the voice in speech, is a most important feature of *≠khomani* as of other Bushman languages. Many words alike in phonetic make-up, but bearing different meanings, are only distinguishable tonetically. For example :

!ku¯ba	(skin petticoat)	*!ku_ba*	(dun-coloured)		
!kaᶾ¯i	(tail)	*!kaᶾ_i*	(leg band)		
¯≠kou	(tsamma)	*≠kou*	(fly)		
-!gaaᶾ	(camel)	*!gaaᶾ*	(sky)		
//ŋ	(come)	*_//ŋ*	(house)	*ʻ//ŋ*	(blanket)

As in the case of *ʻ!khũ*, so in *≠khomani*, I found five species of tone, though the rising and falling tones were more rarely used. The five tones are (i) High-level (¯*a*), (ii) Mid-level (*a*), (iii) Low-level (_*a*), (iv) rising (ʻ*a*) and (v) falling (ˋ*a*). The diacritics are placed immediately at the commencement of the syllable indicated, no diacritic being used for the mid-level tone. The tones do not indicate an actual but a relative pitch.

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[4] See Bleek and Lloyd *Bushman Folklore*, 1911, p. viii.

[5] Doke, *The Phonetics of the Zulu Language*, 1926, p. 33.

[6] Doke, " A Study in Lamba. Phonetics," *Bantu Studies*, Vol. III, 1927, pp 40, 41

(i) *The High-level Tone :* During the enunciation of the syllable the voice is maintained at a relatively high pitch.

Examples :	*ca ˉhaaˀi*	(it is warm)
	ˉ//gai	(springbok)
	ˉ/kheˉsi	(blinkhaar grass)
	gaˉƙu	(flesh)
	kiˉja	(yes)
	ˉ!kwi	(ashes)

(ii) *The Mid-level Tone :* A medium pitch of the voice is maintained during the enunciation of the syllable. All unmarked syllables should be taken to be of this normal mid tone.

Examples :	*//kˀɒn*	(awl)
	//gou	(hard-veld tortoise)
	maƙisi	(money)
	ɲamasi	(Nama Hottentot)
	≠kɒn	(riempie)
	!koƙe	(egg-shell head band)

(iii) *The Low-level Tone :* During the enunciation of the syllable, the voice is maintained at a relatively low pitch.

Examples :	*ˍ!kha*	(water)
	ˍ//ŋxu	(nest)
	ˍ!ŋo	(hare)
	ˍ!gaaˡ	(camel)
	ˍkoum	(cattle)

(iv) *The Rising Tone :* The syllable commences at a relatively low pitch, and the tone glides up the scale to a higher pitch before the completion of the syllable.

Examples :	*ʻ//ŋ*	(blanket)
	ʻ/ŋwike	(tarantula)
	ˋ≠kiiʻsi	(rooiklip)
	!koʻƙo	(to " brul ")

(v) *The Falling Tone :* The syllable commences at a relatively high pitch, and the tone glides down the scale to a lower pitch before the completion of the syllable.

Examples :	*na ˋsou*	(I sit)
	≠ˀɒn ˉca ˋca	(the dog lies)

II. *The Emitted Consonants*

Chart of the Emitted Consonants of ≠khomani

	Bilabial	*Alv-Dent.*	*Palatal*	*Velar*	*Glottal*
Explos.	(*p*) *b*	*t*	*c* *ɟ*	*k* *ɡ*	ʔ
Nasal	*m*	*n*	*ɲ*	*ŋ*	
Lateral		*ɬ*			
Fric.	(*v*)	*s*		*x*	*h* (*ɦ*)
Affric.		*tsʔ*		*kxʔ*	
S-V.			*j*	*w*	

The b- phoneme : Though the bilabial explosive consonant, *b*, is quite commonly heard, it seems always to be alternate to the fricative *v*, and the latter pronunciation is probably usual in connected and non-deliberate speech. When the sound is pronounced explosive it is very soft, being very like the soft *b* of Sotho, and with some speakers is almost devocalized. This is only another example of the phonetic license which is possible in *≠khomani ;* for instance one hears for " child " *|ˀuba*, *|ˀoba*, *|ˀuva* and *|ˀova*, or for " fish " *≠ŋebe*, *≠ŋɛbɛ*, *≠ŋeve* and *≠ŋɛvɛ*.

To the same phoneme evidently belongs *p*. For " dun-coloured " we have recorded, for instance, *!ku_ba¯si* and *!ko_pa¯si*, while *!ku_va¯si* is commonly heard. The pronunciation *p* is heard often with words of Hottentot origin, particularly among proper names, as *atap*, *|ˀaɬa¯kap*, *||ŋwaxup*, where the ending indicates the masculine, but it must be observed that the *≠khomani* speaker as often omits this final *-p*, saying *ata*, *|ˀaɬa¯ka*, *||ŋwaxu*. When the *≠khomani* does use this final *-p* he does not complete the enunciation, producing only the stop of the consonant and not releasing the explosion.

The t- phoneme : In *≠khomani*, *t* seems to be more of a dental than an alveolar consonant, though both pronunciations have been observed. The sound is not of very frequent occurrence, but among others the following have been noted ;

tɔˉkˀɔ	(pierce)
tamtam	(proper name)
tan̠	(walk)

No instance of a voiced form (*d*) has been observed. *t* is used in the affricative combination *tsˀ*, and sometimes in the combination *tx*, as an alternative pronunciation to *cx*.

The c- phoneme : This is the unvoiced palatal explosive, formed with the back of the tongue (much that portion used in forming *k*) brought forward to touch the hard palate. The tongue-tip does not come into contact with the palate, and is kept in a more or less neutral position or against the lower front teeth. The acoustic effect of this sound is much that of *kj*.

c has its own place in *≠khomani* phonology, in such instances as *naˋca* (I lie down), *≠ˀɑn ˉca //ŋa* (the dog stands up), *cowe* (ostrich), *cakˀaˉkugwi* (partridges) ; but is also found as an alternate to *k* when the latter is followed by a member of the *i-* phoneme. This occurs in the case of the plural or augmentative suffix, variously appearing as *-ke*, *-ce* or *-ci*, e.g. *//kaibeke* or *//kaibece* (there is).

c is further found in combination with the velar fricative *x*, e.g. *cxei* (excrete), *cxɑn* (dung), in which case it almost composes a separate syllable, the effect being near that of *cəxɑn*, etc. With some speakers an alternative in these cases is to substitute *t* for *c* giving *txei*, etc.

Further examples of *c :*

ˉcuxai	(who ?)
-!ŋweʼcən	(late afternoon)
/kwẽʼ/ga ˉcuke	(an old man)
ŋ̠cu	(lip)
cxava	(downwards)

The ɟ- phoneme : The voiced palatal explosive, formed as *c* above but with accompanying vibration of the vocal chords occurs in *≠khomani*, though not commonly found. The following instances may be noted :

ɟõ	(skin)
-ɟe, ˉci-ɟa,	(where ?)

The k- phoneme : The unvoiced velar explosive occurs with certain formative elements in the language, e.g. *ka-* or *kā-*, the aggregation prefix, *ke* for *ce*, *ku*, etc., but is also heard as the initial consonant of some words, e.g.

kaʰiˀi	(cold)
kanʰu	(leaf)
ka̍/ˀa	(tsamma runner)
ki¯ja	(yes)
kɔʰɔ	(jackal)
¯ka¯maku	(outside).

It must be admitted that in the first four examples *ka-* and *ki-* are probably formative elements.

In one case ejected *k* (*kˀ*) was observed, viz. the word *kˀokˀo¯si* (hornbill). This was in the speech of *!kuʰice*, and it is certain that this is not in any way significantly distinct from the ordinary *k*. Aspiration was not observed with *k* in *≠khomani*.

The g- phoneme. There is nothing of any special interest to note regarding this, except that the stop of the consonant has a tendency to devocalization, and that *g* is of rare occurrence in *≠khomani*. Note the following :

ga¯ʰu	(pulp)
caʰa¯kugwi	(partridge)
//ŋga	(fasten).

The glottal stop : This is " an explosive consonant formed by a closure and sudden release of the glottis, producing a sound like a slight cough."[7] The glottal stop is extensively used in *≠khomani*, much in the same way as in *'!khũ* with ejective affricates (cf. *tsˀ* and *kxˀ*), with clicks (cf. */ˀ*, *≠ˀ*, etc.) and before vowels (e.g. *¯ˀaĩ*, eat, *_//kaˀ_a* (night).

In some cases the glottal stop between vowels is accompanied by a folding over of the epiglottis[8] and an indefinite type of flap. There is evidently epiglottal friction also present, though difficult to detect. This phenomenon was noticed in the word *//ˀɔˀo¯ke* (smoke) or *//ˀɔʾoʾke*; also in */ˀɔˀõsi* (small bird) and *¯!gɔˀe*.

The Nasal Consonants :

≠khomani employs, as does *'!khũ*, four emitted nasal consonants : *m* (bilabial), *n* (dental), *ɲ* (palatal) and *ŋ* (velar). Three of these, *m*, *n* and *ŋ* are pronounced much as in English, *ŋ* being the nasal sound in the

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[7] Doke, *Bantu Linguistic Terminology*, p. 200.

[8] According to analysis by Dr. P. de V. Pienaar in the phonetics laboratory of the University.

English words *singing*, *pingpong*. The fourth resembles the Romance palatal nasal, found in such words as French *regne* (*rɛɲ*) or Italian *kampaɲa*, in the pronunciation of which the tongue-tip is usually kept down behind the lower teeth, and the back of the tongue brought forward to touch the hard palate near its apex. There is an evident difference between this sound in *≠khomani* and its equivalent in *'!khũ*, which is prepalatal, a difference corresponding to that between the *'!khũ tʃ* and the *≠khomani c*.

m, *n*, *ɲ* and *ŋ* occur before vowels, e.g.

!ˀuma	(plat witgat boom)
simĩsi	(whip snake)
¯⊙kone	(small)
//ˀkana	(scorpion)
ɲama¯si	(Nama Hottentot)
ɲake	(bring)
ŋa	(take)

m, *n* and *ŋ* occur final, e.g.

tsˀa¯xəm	(eye)
≠ŋɔkʼeicum	(caterpiller)
≠ˀan	(dog)
/ˀun	(ant)
¯na//kɔŋ	(no !)

m, *n* and *ŋ* also occur syllabically when they are written *m̲*, *n̲*, *ŋ̲* :

¯ka/ŋom̲ke	(overcast sky)
tan̲	(walk)
¯n̲/ŋum	(moustache)
ncu	(lip)
ŋ̲-//ŋ̲	(out of the house)

A case of doubling of *n* has been recorded, e.g. *⊙ˀunna* (sleep). A case of seeming homorganic use of *m* before the labial click was observed in *m⊙kɔ̃* (my son), while */ˀuuŋkɛ* (shell) is possibly a case of *ŋ* used homorganically.

≠khomani license is again shewn in the occasional use of *ɲa* for *na* to indicate the 1st person singular pronoun with the verb ; note :

na ca	(I lie down)
ɲa ⊙ˀunna	(I sleep)
ɲā /kuu n̲//kau	(I take snuff)

The ɺ- phoneme : *≠khomani* speakers use neither the rolled *r* nor the liquid *l*, but regularly employ the flapped lateral consonant (*ɺ*). " The flapped lateral is not a continuant, but is enunciated with a single flap of the tongue. The contact positions are much as for *l*, but naturally there is more tension. In its production the sides of the tongue are raised to touch the palate all along the upper side teeth. The forward part of the tongue-blade (not the tip) flaps against the alveolus almost to the base of the upper front teeth, while the air escapes over the front and slightly forward laterally."[9] This description stands good for the pronunciation of *ɺ* in *≠khomani*. The corresponding sound in *ˊ!khũ* was found to be retroflex in tongue-position.

Examples from *≠khomani :*

ɺi	(take)
kɔɺɔ	(jackal)
ˉ!ŋaɺisi	(small skaapsteker)
/kɔɺoˉsi	(prickly cucumber)
//koˉɺu	(pebble)

In imported words the rolled consonant *r* is occasionally heard ; I recorded for instance *buursi* (a Boer) ; but this is foreign to *≠khomani* phonology.

Words were examined[10] in which it was suspected that a nasalised form of the flapped lateral was used. These words were pronounced with a very strange acoustic effect. It was found, however, that a plain nasal consonant was being used, sometimes preceded by a pressed vowel. The following were the words concerned :

!gunuˉsi (camel-thorn stain ; heard from Witeman as *!gũɺuˉsĩ*).
/ˀanu⊙khwa (a man's name; heard also as */ˀanũ⊙khwã* and */ˀanu-⊙kha*).
kãkãʾmuˉsi (leaf) or *kaŋkaʾmuˉsi.*

It is possible that Miss L. C. Lloyd referred to the same thing in 1911 in her edition of " Bushman Folklore " collected by Dr. W. H. I. Bleek, when she wrote : " *r* placed over *n* indicates that the pronunciation is between that of the two consonants."

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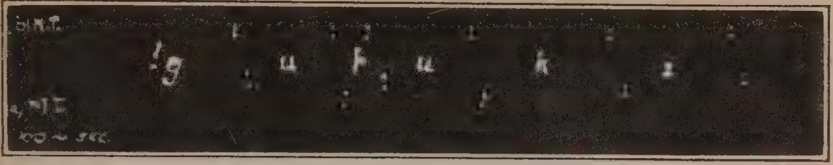
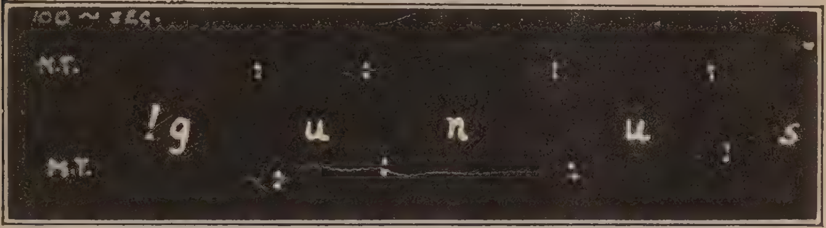
[9] Barnes and Doke, " The Pronunciation of the Bemba Language," *Bantu Studies :* Vol. III, No. 4. pp. 441-2.

[10] By Dr. Pienaar and myself in the phonetics laboratory of the University, the subjects being *Malxas*, *//ka-ku* and *Witeman.*



Kymograph tracing, Mouth (M.T) and Nose (N.T) of the sound-group !guɺuki, illustrating the flapped lateral. Note that there is no expiration through the nose. Subject ||ʔaˉku. Tracing by P. de V. Pienaar.



Kymograph tracing, Mouth (M.T) and Nose (N.T) of the sound-group !gunuˉsi, illustrating the lack of the flap, and the duration of n as compared with the flapped consonant. Subject ||ʔaˉku. Tracing by P. de V. Pienaar.

Fricative Consonants in ≠khomani :

Reference has already been made to the voiced bilabial fricative, *v*, which belongs to the *b*- phoneme. Other fricatives found are the alveolar or dental unvoiced fricative, *s*, the velar unvoiced fricative, *x*, and both voiced and unvoiced glottal fricatives. It is not known whether these last form separate phonemes or not, though it is probable that they are not significantly distinct.

The s- phoneme : pronunciation of this seems more dental than alveolar, otherwise there is nothing particular to remark upon it. Examples :

simĩsi	(whip snake)
sija	(come)
sou	(sit)

Apart from the constant occurrence of this fricative in the singular suffix *-si*, it is rarely heard in *≠khomani*.

The x- phoneme : unvoiced velar fricative, pronounced as '*g*' in Afrikaans and the "*ach-laut*" in German. This is quite commonly met with in *≠khomani*, e.g.

tsˀaˉxəm	(eye)
haixa	(Molopo River)
xauka	(confluence)
ˍ//ŋxu	(nest)
ˉcuxai	(who ?)

The sound *x* is further found in certain combinations : *cx* (or *tx*) has already been noted ; the affricate *kxˀ* is commonly heard both alone and in conjunction with clicks, while *kx* is heard in conjunction with clicks.

The h- phoneme : The unvoiced form, pronounced as in English ‘ hand ’ occurs in *≠khomani*, e.g.

ˉhaaˀi	(warm)
he	(sentence formative)
haixa	(Molopo River)
hẽ≠ˀiꜝ	(meat)

The symbol *h* is also used to indicate aspiration of clicks.

The voiced form, *ɦ*, pronounced as in Afrikaans “ hand,” was observed in a few words, e.g.

!ŋɦaꜝ	(lynx)
/ŋɦĩ	(see)

each case following a nasal click. In the Bushman, however, the succeeding vowel seems to be produced with increased breath-force throughout.

The Affricates : Affricates are composite sounds resulting from a compounding of explosive consonant with its homorganic fricative. In *≠khomani* there are two of these, viz. *tsˀ* and *kxˀ*, each of which is ejective, i.e. articulated with simultaneous glottal closure, giving a characteristic sharpness to the enunciation.

The first of these, *tsˀ*, is pronounced as in Nguni Bantu, and among other I recorded *tsˀii* (bite) and *tsˀukʼuˍke* (mouse). In the word for “ God ” imported from Nama Hottentot, an aspirated form of this affricate was noted, viz. *ˉtshu //goa :* this is definitely foreign to *≠khomani.* It was noted that in *ʻ!khũ* the unvoiced affricates were invariably ejective (*ʻ!khũ* employs *tsˀ*, *tʃˀ* and *kxˀ*).

The second *≠khomani* affricate is *kxˀ*, a sharp velar sound, which is typically Bushman. This same sound has been found in Korana Hottentot and in some of the South-eastern Bantu languages. It is probable that all of these derived the sound from Bushman. This sound, the ejective velar affricate, has often been mistaken for a click.[11] "The first element of the sound is *k*, with the usual velar contact of the back of the tongue. The release of the explosive, however, is slower than with the the simple *k*, and the tongue is moved forward allowing of a certain amount of friction after the enunciation of *k*, this friction forming the velar unvoiced fricative *x*. The whole is pushed forward with a force pent up by the closed glottis, indicated by the glottal stop."[12] In *≠khomani kxˀ* occurs before vowels and in conjunction with clicks ; examples :

kxˀam¯ce	(good)
¯/kxˀeĩ¯si	(beads)
!kxˀaisi	(doek)
kxˀei_ˀa	(laugh)
//kxˀuŋ	(bark of tree)

The Semi Vowels : Both *w* (velar) and *j* (palatal) semi-vowels occur in *≠khomani*. The former has already been dealt with as forming a certain type of falling diphthongs. The palatal only occurs between vowels and may therefore be considered more of a glide than a semi-vowel, as in the case of *ke¯ja* (yes), *si¯ja* (come).

General Observations on the ≠khomani Emitted Consonants :

To summarise, a glance at the consonant chart shews how retarded the consonant system is in *≠khomani*, with a heavy percentage of phonemes palatal, velar and glottal. There is a complete absence of dentilabial emitted consonants, this lack being to a large extent made up by the use of the labial clicks, which are often pronounced dentilabially. The paucity of voiced fricatives, there being only *ʋ* of the *b*- phoneme and *ɦ*, an incidental non-significant form ; and the complete lack of voiced affricates, are most noticeable. In fact real voiced emitted consonants seem to be confined

(a) to the nasals, of which there is a full range ;
(b) the flapped lateral ;
(c) the *b*- phoneme ; and
(d) the infrequent occurrence of *ɟ* and *g*.

In considering these emitted consonants, it must always be remembered that it is the clicks which play so large a part in the vocabulary ; it is not surprising therefore that the emitted consonants are not so full in example as with non-click languages.

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[11] Both by writers on Nguni Bantu and *ʼ!khũ* Bushman.

[12] Doke, "*ʗhũ̬:* Phonetics," *Bantu Studies*, Vol. II p. 143.

III. *The Reversed Consonants or Clicks*

Like *ʻ!khũ*, the *≠khomani* is a " five-click language, employing five positional types of click. Of these positional types four coincide with those of *ʻ!khũ*, but one, the labial click is not found in *ʻ!khũ*, which employs as its fifth click the retroflex, unknown in its turn to *≠khomani*. Each of the clicks may be used in a series of ways, as for instance, plain, aspirated, ejected, voiced, nasal, and so on.

The following is the table of forms so far identified in *≠khomani* :

	Labial	*Dental*	*Alveolar*	*Palato-alv.*	*Lateral*
Plain	*ʘk*	*/k*	*≠k*	*!k*	*//k*
Aspirated	*ʘkh*	*/kh*	*≠kh*	*!kh*	*//kh*
Ejective	*ʘˀ*	*/ˀ*	*≠ˀ*	*!ˀ*	*//ˀ*
Voiced	*ʘg*	*/g*	*≠g*	*!g*	*//g*
Nasal	*ʘŋ*	*/ŋ*	*≠ŋ*	*!ŋ*	*//ŋ*
Various other releases		*/kˀ*		*!kˀ*	*//kˀ*
		/kx	*≠kx*		*//kx*
		/kxˀ		*!kxˀ*	*//kxˀ*
				!ŋɦ	
			≠ˀh	*!ˀh*	

A click may be defined as an injected consonant produced by a rarefaction between two points of closure, one of these points always being velar. They are reversed sounds, in the production of which a somewhat complicated mechanism has to be set in operation. Usually there are two points of tongue-articulation, between which a space of rarefaction is created, the smack of the click being made on the release of one of these points. One of the points of articulation is invariably velar, i.e. the back of the tongue is raised to touch the soft palate. The second point of articulation or position of release varies with the different types of click, being labial or labio-dental in the case of one type.[13]

In *≠khomani* each of the clicks may be pronounced unvoiced (i.e. without concurrent vibration of the vocal chords), and these unvoiced varieties may vary in their release. First there is the plain click in which the velar release, perceptibly after the injection, is detected as a *k*- sound (e.g. *!k*, *//k*, etc.) ; then there is the aspirated form in which an audible rush of air causing throat friction follows the release (e.g. *!kh*, *//kh*, etc.) then there is the ejective form, in which the glottis is closed, the velar point of articulation being released silently, no *k*- sound being heard (e.g. *!ʔ*, *//ʔ*, etc.). In addition to these there are various other modifications of release. The velar element may be accompanied by glottal closure as in the word */kʔa¯ki* (light), or it may become affricative as in the word *//kxã'* (pouch) and ejective as well, as in */kxʔun¯si* (small black ant). A rare instance of ejective click followed by an aspiration was recorded in *¯/ʔhu¯si* (white man), and *¯≠ʔha¯ba* (plat doring), though the former was also recorded as */ŋũ¯si*.

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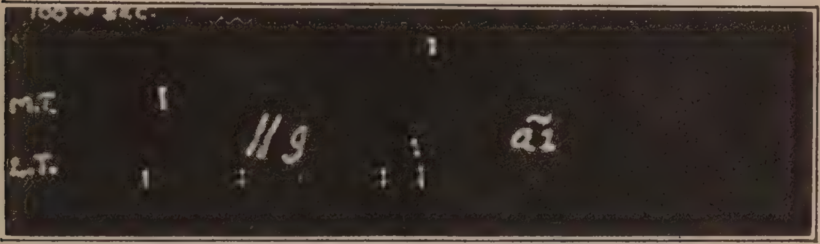
[13] The physiological mechanism of the clicks in Zulu has been described by me in detail already, and this description applies equally to the relevant Bushman Clicks. See Doke, *Phonetics of the Zulu Language*, pp. 123-126. See also pp. 295-305.

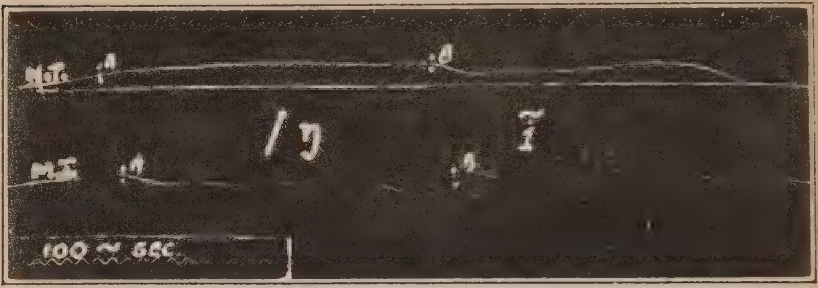
The next important type is the voiced click. Examination of kymograph tracings shows that the stop of the click is unvoiced, and that voicing commences with the release :



Kymograph tracing, Mouth (M.T) and Larynx (L.T) showing a fragment of the sound-group ¯na /ŋĥĩ //gãi (I see the hyena). Note the voicing in L.T. after the closure, and after the release of the click, giving a degree of voicing equal to $\frac{5}{10}$ of the sound. Subject Malxas. Tracing by P. de V. Pienaar.

We indicate these voiced forms by the symbol *g* following the click symbol (e.g. *!g*, *≠g*, etc.). No instance of voiced click followed by glottal stop, as occurred in *'!khũ*, was observed in the *≠khomani* words collected.

In the formation of the nasal click, as the kymograph tracing reveals, the nasalisation accompanies the click throughout, the velum being lowered even during the stop. Nasal clicks in *≠khomani* may become syllabic, that is to say though the actual click sound produced by the suction on release is momentary, the velar nasal which accompanies the click from its commencement may be maintained through such a period as to produce syllabification and have its own particular tone ; examples :

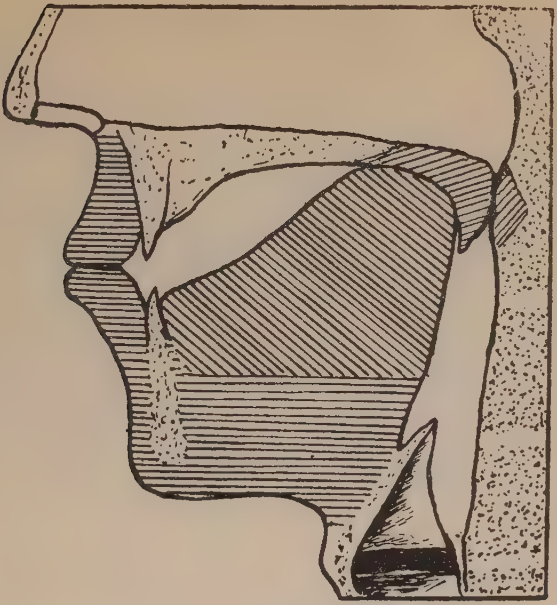


Kymograph tracing, Mouth (M.T) and Nose (N.T), showing a fragment of the sound-group _na |ŋɦ̰ĩ _!ga^3 (I see the sky.) Note that the whole click has a nasal voiced accompaniment. Subject Malxas. Tracing by P. de V. Pienaar.

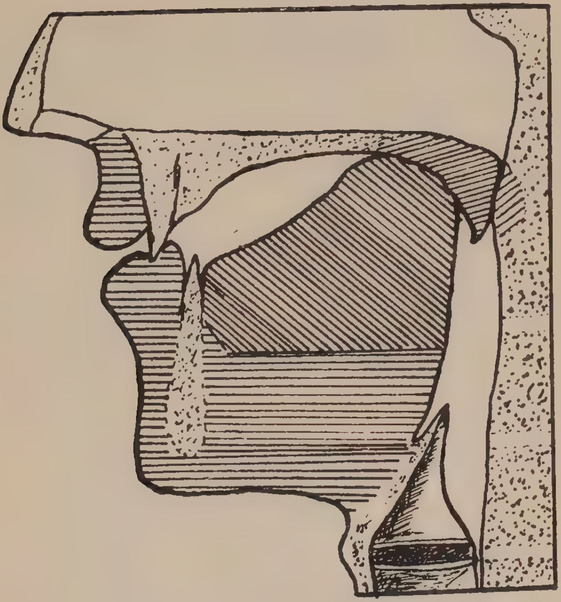
_//ŋ̱	(shelter)	*//ŋ̱*	(blanket)
//ŋ̱ga	(fasten)	*/ŋ̱¯ˀhwi¯si*	(millipede)
¯//ka/ŋ̱	(arrow)		

(1) *The Labial Clicks :*

Two positions for the pronunciation of the labial click have been observed, a bilabial and a dentilabial. The following diagrams illustrate these :



1. (*a*) *Bilabial Click*



1. (*b*) *Dentilabial Click*

The tongue-tip is pressed tightly against the lower front teeth, the back of the tongue being raised to touch the velum ; the sides of the tongue are raised to the upper gum-ridge. In the case of the bilabial pronunciation the two lips are then brought completely together, the tongue-centre is depressed rarifying the air above it and on release of the lips the suction sound resembling a kiss is produced. In the majority pronunciation, however, the lips were not brought together, but the lower lip was pressed lightly against the upper front teeth to effect the closure. The click in this latter case was often drawn out, somewhat as the lateral click, owing to infiltration of air between the front teeth. Similar drawing out was noticed with the bilabial type with some speakers. This labial click has not so varied a range as the other clicks, but the plain, aspirated, ejective, voiced and nasal forms were all recorded. It is a little doubtful whether the voiced form recorded constitutes a significant difference. The symbol ⊙, used by Dr. Bleek in his texts, is employed basically for the labial clicks. (See plates 11 and 12.)

Examples :

⊙kho¯si	(branch)
¯*⊙ˀun*	(sleep)
⊙ŋwa	(wild cat)
⊙koi	(flesh)
⊙ġoᶾke[14]	(firewood)
m̲⊙kõ	(my little one)
ka¯⊙kwaica	(body)

(2) *The Dental Clicks :*

Pronounced as in *ʻ!khũ*, Nama and Nguni (where the symbol is *c*).

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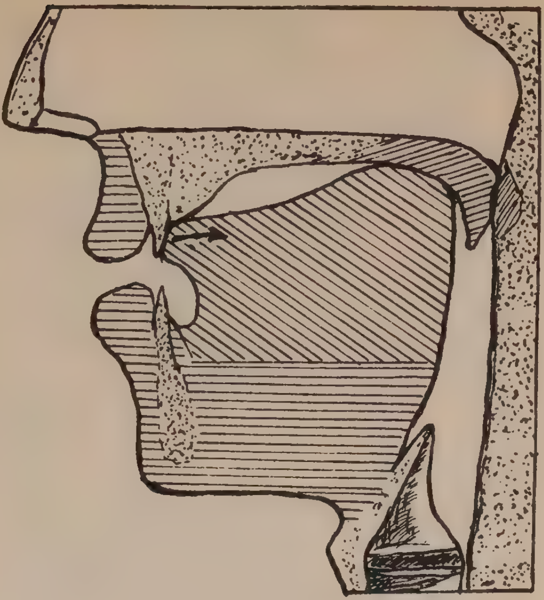
[14] As pronounced by *//ga¯//ŋa ;* others gave either ⊙*k* or ⊙*kh.*



2. Dental Click

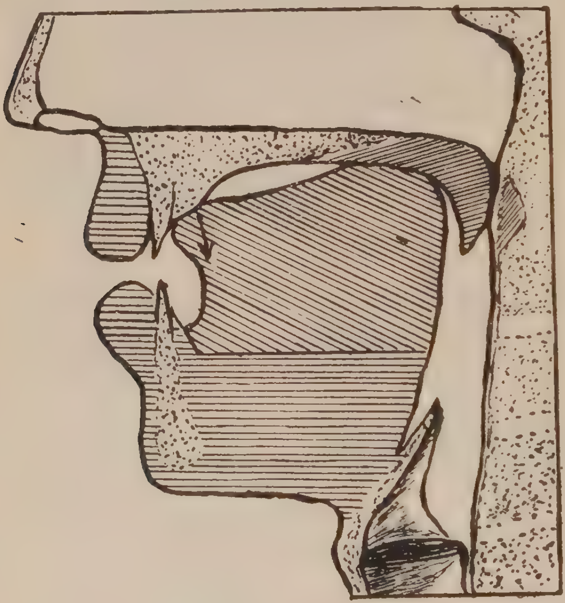
Tongue-tip pressed against upper gums and upper front teeth back of tongue raised to touch velum, and sides of tongue raised to upper gum-ridge, forming a rarefaction between the middle of the tongue and the palate. The tip of the tongue is released and the click ensues. This dental click may be at times slightly drawn out, there being considerable friction with the teeth, resembling the sound made when a person sucks against the teeth to remove something lodged between them. The essence of this click is found in the English click of annoyance, written *tut-tut*, in reality a repeated enunciation of the click incomplete, i.e. without velar release and hence unaccompanied by any vowel. In Bushman the symbol /, used by Dr. Bleek and regularly in Nama Hottentot, is employed basically for the dental clicks.

Examples :	*/ˀa*	(die)
	/gã̄ᶾ	(hard veld)
	/gəbi	(asparagus)
	¯/ˀhu¯si	(white man)
	/kˀa¯ki	(light)
	/kaʰu¯si	(geelbos)
	¯/ke	(blue wildebeest)
	/khɛ¯si	(blinkhaar grass)

|khoˉsi	(bone pipe)
|kxˀalˀa	(street between dunes)
ˉ|kxˀau	(snake)
ˉka|ŋum¨ke	(overcast sky)
|kuu	(tobacco)
|ŋā	(head)
|ŋɦĩ	(see)
|ˀoeˉja	(shoot)

(3) *The Alveolar Clicks :*

Pronounced as in *ʹ!khũ* and Nama.



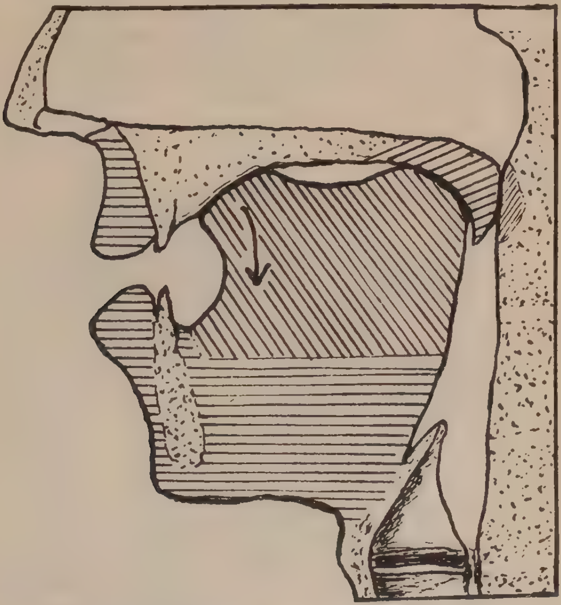
3. Alveolar Click

Upper part of tongue behind the tip pressed firmly against the gum-ridge behind the central upper teeth ; back of tongue raised to touch velum, and sides of tongue raised to complete space of rarefaction between velum and alveolus. The tongue front is brought sharply down, the resulting click resembling the sound made by a child when tasting something sweet. This click is instantaneous and cannot be drawn out with friction. It is foreign to Nguni. The usual Hottentot and Bushman symbol ≠ is here employed basically for the alveolar clicks.

Examples :	*ˉ≠ˀaũ*	(tsamma knife)
	≠gwi	(ostrich egg)
	≠kaʰi	(piece of board)
	≠ŋosoce	(Nosob River)
	≠kxoa	(elephant)
	≠kɑn	(riempie)
	ˋ≠khwaa	(speak)
	≠kẽˀa ≠khwe	(west wind)
	≠ˀɑˍma	(dragon-fly)
	≠ˀun	(steenbok)
	≠go ˍɟe	(where is the man ?)
	≠ŋwā	(meerkat)

(4) *The Palato-alveolar Clicks :*

Pronounced as in *ˊ!khũ*, Nama and Nguni (where the symbol is *q*).



4. Palato-Alveolar Click

Tongue-tip placed firmly on the point of division between palate and alveolus, not so spread out as in the case of the alveolar click ; back of tongue raised against side upper gums. The tongue-tip is released sharply downwards, the resulting click resembling the sound of a cork being drawn from a bottle. As with ≠ so also this click is instantaneous.

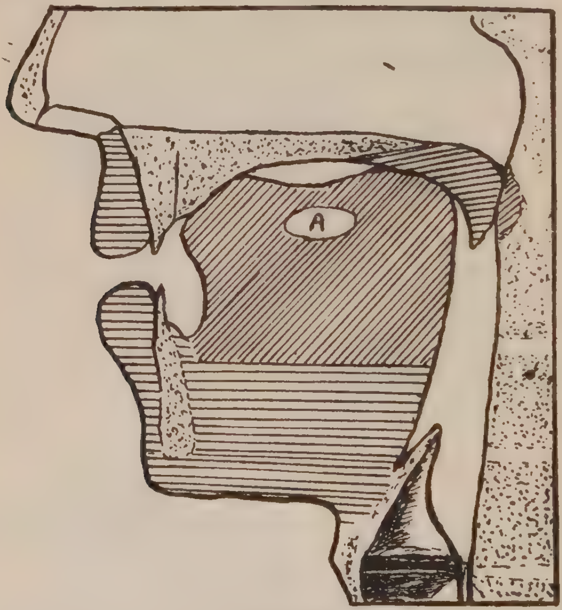
The usual Hottentot and Bushman symbol *!* is here employed basically for the palato-alveolar clicks.

Examples :

¯!kam¯si	(ear-ring)
!kxˀai¯si	(doek)
!gou	(hyaena mane)
!ka¯na	(man's front skin)
¯!khaƙi¯si	(arrow head)
!go//ŋa	(bark arrow sheath)
!ŋa¯ma	(draaigat jackal)
_!khaᶾ	(water)
!ˀaƙeci	(dancing ring)
!ˀam¯si	(feather)
¯!ŋũ	(sand dune)
!kˀɔƙa¯si	(kort been grass)
!ŋɦaᶾ	(lynx)

(5) *The Lateral Clicks :*

Pronounced as in *ʻ!khũ*, Nama and Nguni (where the symbol is *x*).



5. *Lateral Click*

Upper-part of tongue-tip against alveolus ; tongue-back against velum ; sides against upper side teeth. The normal position is thus much as for the palato-alveolar clicks, but the release of the tongue is not forward but lateral, the injection being caused by withdrawing one side (A) of the tongue from the upper teeth. The front of the tongue is kept firmly in position until the completion of the injection. The lateral clicks, even more so than the dental, are usually drawn out to considerable length with friction against the side teeth. The basis of these clicks is essentially the same as the incomplete click used by a London cab driver to urge on his horses. The usual Hottentot and Bushman symbol // is here employed basically for the lateral clicks.

Examples :

-//ŋ̱	(shelter)
//kˀan	(awl)
//kha⁻ni	(carrying skin)
//ˀa	(tsamma pip)
//ŋaa³cike	(iron skin-scraper)
⁻//ku⁻ƙu	(quartz)
⁻//ka/ŋ̱	(arrow)
kan//kan	(hair of caterpiller)
//go⁻si	(tanning root)
_//ka_ˀa	(night)
⁻//kho_si	(thorn)
_//gou	(tortoise)
//kxã³	(pouch)
//kxˀuŋ	(bark)

Indefiniteness of the Clicks in ≠khomani.

As with the vowels and certain of the emitted consonants, there is, in *≠khomani*, a certain amount of latitude and changeability even with the clicks. Some of this difference, however may be dialectal or individual. For instance for " riempie " *Malxas* gave *!kɒn* while */ˀən* gave *≠kɒn*. Greater latitude is noticed in regard to the click accompaniments, for " cheetah " I recorded *!ˀaƙu* and *!kxˀaƙu ;* for " see " */ŋe* and */ŋħĩ ;* for " tsamma knife " *⁻≠ˀaũ* and *≠ŋaũ ;* while *//ga⁻//ŋa* had a definite tendency towards voicing, e.g. *_//gaa* for *_//kaa* (night), *⊙go³ke* for *⊙khoke* (firewood), *!go⁻ba* for *!ko⁻ba* (skin petticoat) ; */ˀən* similarly substituted certain voiced forms, e.g. *!ga⁻na* for *!ka⁻na*.

Representation of the Clicks :

In my " Phonetics of the Zulu Language "[15] I discussed at considerable length the theory of the orthographic representation of the clicks, propounding a scheme of separate symbols for voiced and nasal forms. As the Bushman languages have already been considerably recorded[16] in the orthography employed in current Nama, I have on consultation with my colleagues, felt it unnecessary here to use the type of orthography I employed for my work on the *ʻ!khũ*, and have adhered to the traditional form. The plain click however I mark by *k*, the aspirated by *kh*, the ejective by ʔ, the voiced by *g* and the nasal by *ŋ*, in this departing slightly from previous usage. I consider this, however, necessary for the phonetic treatment, and for consistency. The element here marked is always velar, hence *ŋ* (not *n*); in the unvoiced forms, unless there is a glottal stop, the velar release is always *k*, hence *k*, *kh*, *kx*, etc.

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[15] 1926, page 132.

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[16] Especially by Dr. W. H. I. Bleek, Dr. L. Lloyd and Miss D. F. Bleek.

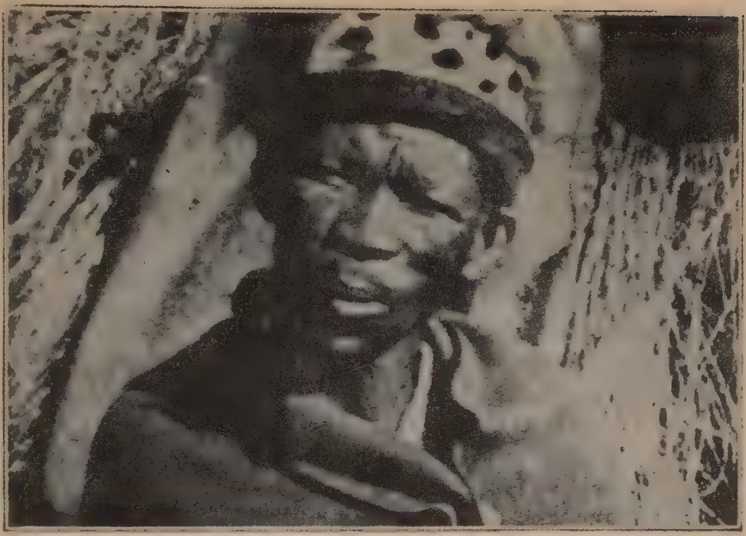

Plate 11. Malxas shewing position of lips in the pronounciation of the labial click

(from cine camera)

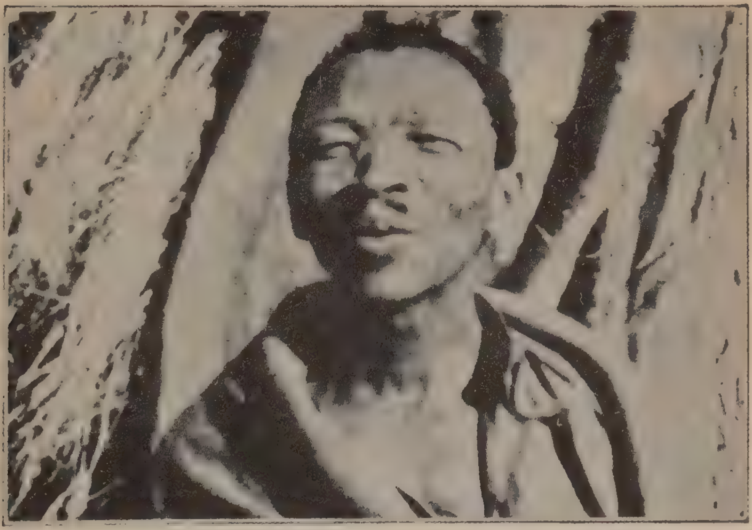

Plate 12. |ˀən shewing position of lips in the pronounciation of the labial click

(from cine camera)

GAMES, PLAYS AND DANCES OF THE *≠KHOMANI* BUSHMEN

By C. M. DOKE

One of the most noticeable things I observed in the Bushman attitude to life was the part taken by play and dancing. Work is necessary when food has to be obtained, when shelters have to be built, or when their limited requirements in clothing, adornment or weapons have to be met. When a camp is prepared and food is plentiful (or provided as it was at Bain's camp) there is nothing for the Bushman to do but indulge in games by day, dance by night or stage some of the plays in which his powers of mimicry and dramatisation are so well revealed. Any special occasion or special excitement provokes singing and dancing. Although our arrival at the camp was at 3.30 a.m. this was heralded from the Bushman shelters, a few hundred yards distant, by dance and song, before four o'clock. On another occasion I observed, on presenting a Bushman with a copy of his photograph, after the first excitement had passed, a number of his friends gathered round him, as he held the picture, and began to clap, stamp and sing. This, the lighter side of life, seems to play a large part with the Bushmen, and the casual observer would conclude that they had not a single care in this world!

Another thing which struck me most forcibly as I watched them whether in games, plays or dances, was that no differentiation was made on account of age, except, in so far as ability was concerned. Octogenarians studiously danced in the ring along with little tots of four and five. The very little children had their parts in the plays, whether acting as dogs in the gemsbok play, or as baby baboons in the baboon play, or as springbok kids when the lions were hunting game. This is such a different attitude from that adopted by European and Bantu. At a European school, the senior boy is degraded by playing with the juniors; among the Bantu the system of age-grades imposed menial offices upon the members of the junior grades; but among the Bushmen I never observed the practise of making the juniors " fags " for the seniors—the whole camp in their games and in the more serious pursuits of life (when they were necessary) participated without any discrimination other than that of strength and ability. I consider this lack of segregation of the children a most important factor in judging of Bushman character. Alongside of this it must also be observed that no Bushman is too old to join in the games; and when a dance has started it is not long before the wizened old woman, who can hardly bend her limbs, is seen to be clapping her hands solemnly together and shuffling her feet in an attempt to join her more vigorous juniors in the chorus singing.

This lighter side of Bushman life, bound up too with ritual and tribal observance, seems to fall naturally into three categories: the games, the plays and the dances. Our brief stay at the camp gave us opportunity to observe only a few examples of what must be represented by many types. What was observed, however, I shall now briefly describe in the above order.

I. *THE GAMES*

(a) *Shooting :*

Little boys as soon as they can run about have diminutive bows (*/khou*) and arrows (¯*//ka/ŋ̲*) made for them, and soon learn themselves to make these. Generally the arrow is just a slightly pointed stick. They are fond of setting up a target, maybe a piece of tsamma shell and having competitions. The target is often not more than eight or ten feet away from the boys who squat down and shoot in quick succession. As they grow and become more proficient, they use a more distant target—that used by the men being about twenty yards away. It is not long before the boys transfer their practice to birds and small animals, gradually learning to take part with their elders in the serious hunt. (See plate 13.)

(b) *Throwing Sticks :*

From very little boys to grown men Bushmen are constantly seen indulging in this game[1] which is called *//ˀakˀa*. A mound of sand is made, in size and shape much like a grave mound. Each player has a carefully whittled stick about a yard in length and about the thickness of a finger, slightly thicker at one end than at the other. The stick is held by the thick end and the player runs fast towards the mound, throwing the stick down in such a way that it makes a complete revolution in the air before striking the sand when it shoots off and soars away to a considerable distance, thicker end first, often piercing the ground and standing half-erect. One after the other the players run to the mound and throw their sticks, shouts greeting the one who makes the best throw. The whole secret of the throw lies in the dexterity of the wrist twist which turns the stick completely over before it strikes the sand mound. Children are seen running along among the tussocks of grass throwing their sticks as they go out into the veld to forage.

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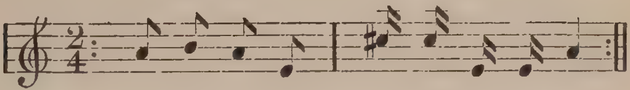
[1] Referred to by Miss D. F. Bleek as practised by the Naron Bushmen cf. "The Naron," p. 21.

(a) *⊙kõ //koka !koᵇaiki*[2] :

This game we saw played by the girls only. A number of girls was lined up; one player with her back to the line moved up and down the line side-stepping, chanting certain words while her opponent facing her moved along similarly, endeavouring to capture one of the girls in the line behind the defender. As the chant ended at a certain word the relative positions of the two players would leave one of the line of girls exposed. She would then be taken by the captor. This was carried on until all the girls were caught. The game is very reminiscent of " musical chairs." In Miss Bleek's account of this game among the Naron, she records the words chanted as " My oxen they are, I refuse them; Thy oxen they are not, I refuse them; I say my oxen they are;" the one player representing the owner and the other the claimant of the girls who represent the oxen. It is probable that the game, words and all, are of Hottentot origin.

(d) */ˀape /ˀape :*

This game, played more particularly by the girls, though small boys also participate, is almost identical with the European game of "Oranges and Lemons." Two girls face one another and sing as each strikes the palms of her hands against those of the other. The music of the song is as follows[3]:



and the words */ˀape /ˀape !kubus kɛᵇɛ̃ !kwi*—words of Hottentot origin meaning: " Paauw, paauw, the egg goes smash!"

Meanwhile the other girls in a long line holding on to one another dance round and pass between the two girls beneath their upraised hands. The last on the line is usually caught by the two who question her. She replies either " I come behind the sun (*soᵇe*)," or " I come behind the moon (*//kap*)[4]," and on her choice she takes her stand behind one or other of the two. This goes on until all the players are accounted for, when the usual tug-of-war ends the game. (See plate 14.)

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[2] Called by Miss Bleek " the ox game" and described by her on page 19 of " The Naron."

[3] Music recorded by Professor P. R. Kirby.

[4] Both these words are of Hottentot origin, cf. Nama *sores* and *//kap* respectively.

(e) *Hawks and Prey : (/ka_ˀuŋ)*

A number of girls sit down one behind the other in a long line, holding on to one another. Two girls representing hawks then run towards them uttering shrill whistling cries ; they swoop past the seated line one on each side and the whole line sways to one side as though to evade the attack. The hawks after passing the line turn back and again swoop along the line from the rear ; this time, however, one of them taps the last girl on the line as they pass. The victim struck by the hawk rises, stumbles away from her companions and falls huddled in simulated death. Back come the hawks this time passing the seated line rapidly and making for the prostrate girl around whom they swoop backwards and forwards, eventually pouncing upon her. Now ensues a regular biting and pinching of the victim by the two hawks ; and the wriggling and screaming of the unfortunate victim, who according to the rule of the game dare not retaliate—for she is dead—are greeted with great applause by the onlookers. When they have sufficiently tormented the first victim, they repeat the swooping and catch the one now last on the line ; and this goes on until only a few are left, whom they strike wholesale, and a regular rough and tumble ensues, after which the players are left lying about as corpses, the two hawks having thoroughly enjoyed themselves at their expense.

Particularly did we notice the evident joy of two sisters who acted hawks, when they had their mother as a victim (for she couldn't keep out of any of the games). The old lady could not retaliate and could only take her medicine as they bit her arms and legs, screaming at the top of her voice and vigorously kicking and twisting. So they had their revenge on her for some disciplinary punishment she had recently meted out to them. (See plates 15, 16, 17 and 18.)

(f) *Guess Which Hand!*

Players, either male or female (old and young participate) sit opposite one another in two rows. One has a piece of charcoal in his hand. He places his hands together and throws them towards his opponent meanwhile grunting loudly *hĩ haˀ haˀ! hĩ haˀ ma haˀ !* continually thrusting his fisted hands forward. Meanwhile his opponent who has to guess in which hand the charcoal is makes corresponding thrusts with his hands, loudly snapping and clicking his fingers and replying with similar grunts. He closely watches the other's eyes to get some cue as to which is the hand, and then makes his guess. If he is successful he takes over the charcoal and the other does the guessing. If he is unsuccessful he loses his turn and the one next to him tries to guess. This goes on backwards and forwards with great excitement. I have noticed that this game gives rise to much cheating and consequent quarrelling. The cleverest players watch their opponents' eyes, and the little youngsters when learning invariably give the show away by their eyes, which they are unable to control from showing concern for one hand or the other. (See plate 21.)

(g) *Darts* (*//ka¯bi*) :

A number of " oxen," *_kom*, are prepared by cutting up pieces of green tsamma shell each piece about an inch square, but they vary in size and shape, being roughly cut from the melon. Each piece is about ¼ inch thick, and maybe twenty or thirty of these pieces are prepared. Then one piece is carefully shaped, smaller than the others and round, about the size of half-a-crown. This is the *!kənsi*[5] or " *ghoen*," the most valuable ox in the game. Five or six players, usually men or boys, though I have seen girls participate, sit in a circle. Each has provided himself with a small dart, *//kabisike*, about six inches long, a thin bit of stick sharpened at one end, which is held between the fingers as shown in plate 19 and discharged with a downwards flick to pierce the " oxen," the other hand often being held in position as a guide. (See also plate 20.)

To begin with all the pieces are thrown down in the circle and players shoot the darts at them to pierce and capture the oxen. When it comes to the *!kənsi*, if a player misses it in his throw he is out of the game. They are most careful in aiming at this piece. When a player has a pile of oxen before him his next move is to try to get rid of them. He pierces one after the other passing each captured piece to his neighbour. Immediate he misses a throw it is his neighbour's turn to throw and return back what he pierces until he too fails. The first one to clear all before him carefully aims at the *!kənsi*, and if successful wins the game.

II. *THE PLAYS*

I know of no better term by which to describe what are really dramas of the desert. The Bushman inborn capacity for imitation and minicry is shewn to wonderful advantage when he stages the hunting of the gemsbok, or the killing of springbok by lions or the fight between a baboon and a dog. The veld, trees, sand and grass are his stage ; each actor has his part and plays it in no unmistakable way. Old and young, male and female participate : only the very aged being excluded owing to the strenuous nature of the acting in most cases. I shall now describe those plays which we had an opportunity of observing.

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[5] This is probably the origin of the word "*ghoen*" used in Afrikaans to-day.

(a) *The Spooring Play :*

Two men arrayed for hunting each carry with them a short stick surmounted by the brush of a Cape fox (¯//ˀ*a*). This they use to signal to one another without uttering any sound. They go through all the processes of following an imaginary spoor of game, signal how the animal has run, or stood or fed, using deft movements of their brushes. Every now and then they pass the brushes across their faces as though indicating perplexity. Presently their movements and signalling become more and more excited until they reach where they can see their quarry (one of the boys) lying behind a grass tussock. Up they rush and with arrow or spear go through all the representation of wounding and despatching the game. This is a most fascinating piece of play-acting to watch.

(b) *The Gemsbok Play :*

This is probably the Bushman masterpiece of dramatic representation, and one in which a number of actors participate. One man (in the case of the group we studied, this being always *Malxas*) takes the part of the gemsbok. He procures a forked stick with forks of considerable length and either holds this to his forehead or ties it to his forehead with a band round his head. He then takes his place on the slope of a dune and proceeds to imitate the various actions of a gemsbok, biting at the grass, tossing his horns, or scraping at imaginary succulent roots with his feet, and eventually settles down to take his rest. In one staging of this, *Malxas* was careful to inform me that he was a lame gemsbok and limped around on his knees and one hand in representation.

Meanwhile three or four hunters fully armed have come out with a dozen or more boys who act as dogs. These latter spread out among the tussocks of grass, running on hands and feet (like baboons, not on hands and knees) looking for spoor. Presently they find the supposed spoor and dogs and hunters disappear over the dune, soon to appear just above where the gemsbok is resting. Immediately the dogs appear, the gemsbok scents trouble, gets up, tosses his horns and makes off as fast as he can for the nearest thorn bush, with the whole pack of dogs barking and yelping after him, and the hunters bringing up the rear. On reaching the thorn bush, the gemsbok turns at bay with his tail in the bush and proceeds to knock over and toss the dogs which tackle him, making occasional rushes out to attack the hunters as well. An exciting fight takes place until the hunters, who have been manoeuvring for position, get in a dummy arrow, whereupon with loud groans the gemsbok falls, to be most realistically despatched by the hunters and pounced upon by the pack of dogs. All the participants thoroughly enjoy this acting, though the one acting gemsbok sometimes complains that he gets more rough handling and prodding with sticks than he cares for.

(c) *The Steenbok Play :*

A number of women with skins and skin bags slung on their backs, take their digging-sticks and pretend to be digging for roots, using the sticks and pretending to pick up roots and place them in the skins. Presently appears a woman dressed in imitation of a hunter but also carrying a digging stick. She approaches the women digging and asks them if they have seen her steenbok. They point in a certain direction indicating that it has gone there. Off goes the woman along the spoor, but before long she is back again with the same question and the women send her off in another direction. She is soon back again (her object as hunter is to pay attentions to the women,) and now the women shew annoyance and send her off again with cries of anger. This is repeated until, throwing off her pretence, the hunter-woman, placing her digging-stick between her legs to represent a penis chases the women, who scatter shrieking.

As far as we could ascertain this is practically always acted by the women only, though once in the excitement of our first arrival at the camp the old patriarch *!kuʔice* (Abraham) took the part of hunter to the intense glee of all the Bushman onlookers.

(d) *Springbok and Lion Play :*

This is a very exciting drama. The girls act as springboks with little children as the kids. Two or three men act as lions. The girls fold up and secure their skin petticoats till they look like " shorts," the better to imitate the animals. Then they imitate in cries and actions the graceful springboks with wonderful skill. They prance along plucking at the grass with their hands and pretending to feed; every now and then, uttering whistles of alarm, they bunch together with the kids between them ; then run off again bounding over imaginary tracks and obstacles. The lions stalk with consumate skill and crouch at strategic spots. Every now and then one of them makes a rush and a bound, catching a kid and pretending to rend and devour it. Soon all the kids are lying about dead, and the real fun commences when the lions catch the plump springboks, which they do with much tantalising on the part of the girls, and much enjoyment on their own part. In one depiction of this play which I witnessed the end came dramatically. One springbok had long evaded two lions till eventually both sprang at once from opposite sides, but instead of catching the girl, they caught one another and then was depicted a wonderful imitation of a lion fight with mighty roaring, snarling and contortion of faces. One lion eventually emerged with nose bleeding furiously. (See plates 22—26.)

(e) *Ratel and Dogs :*

Another clever imitative piece of acting, though with less dramatic effect is that of the ratel fighting with dogs. One man takes the part of the ratel, imitating his walk, is attacked by numbers of boys imitating dogs, and puts up a very realistic fight, in the course of which he puts several dogs out of action.

(f) *Baboon and Dog Fighting :*

Here again we observed two clever actors, *Malxas* as the dog and *//gaˉ//ŋa* as the baboon, imitating the fight in a most realistic way, both as to actions and facial expressions, and as to the sound produced. The loping gait of the baboon was well shewn with the hands moving up and down and head moving from side to side as he utters his hoarse bark. The rushes of the dog with his snarling and yapping, at times his panting and his squealing when bitten were extraordinarily well imitated.

(g) *Tortoises :*

The women and girls are adepts at imitating tortoises. Their legs are doubled up and folded behind them and they waddle along, one after the other on fists and knees leaving a trail not unlike that left by the tortoise. They sometimes dramatise this piece in imitation of copulating tortoises. One represents the female tortoise " on heat." She goes ahead. Then comes one representing a male and scenting her tracks pursues them till she catches up the first, whereupon she endeavours, still in her trussed-up condition, to mount on the back of the female. Meanwhile others representing males have come on the same spoor and arrive to contend for the position and push and bump the first male to oust him, and this contest goes on in very realistic imitation of the real creatures, who are said to churn up the soil for many yards around on such an occasion. (See plate 27.)

On other occasions the girls, trussed as tortoises, follow one another round forming an elliptical track, and every now and then one of them cuts across the track, but I was unable to ascertain the significance of this.

(h) *Gemsbok as Man :*

The women also enacted a scene, which we only observed once, and the significance of which it was difficult to grasp. It was explained to us that it represented a gemsbok as a human being copulating.

(j) *Sound Imitation :*

I include here the description of two sound imitations, somewhat akin to that of the baboon and dog fighting. The sound effect is in these the most important.

The first was carried out by *Malxas* and *!kai.* Sitting down they drummed on their chests with the tips of their fingers reproducing most realistically the trotting, cantering or gallopping of horses. (See plate 29.)

The second carried out by *//ga¯//ŋa* and *Witman* represented the running of a big male baboon. For this the fists were used, struck on the chest and down onto the inner thighs, while the head was moved from side to side and the gruff barking imitated at intervals. (See plate 30.)

III. *THE DANCES*

It is not within my province to describe the technique of Bushman dancing or to remark upon the music which accompanies it,[6] but there were some dances the special significance of which I made particular note. Dancing is more spontaneous at night than during the day, but all dances are not necessarily relegated to the night. We were treated to a dance accompanied by a song of welcome soon after our arrival. We observed a dance in honour of the new grass. The three which I shall now briefly describe are : the Baboon dance, a Wedding dance, and an Induction dance.

(a) *The Baboon Dance :*

This dance is carried out in the usual circular style, the dancers following one another round forming a ellipse rather than a circle in the sand. One of the number bends down and the others leap-frog over his back in imitation of the baboon. As the dance warms up one of the women (generally */ganaku* in the group we observed) will from time to time leave the group of clappers, cross the ring and approach the principal baboon dancer with obvious sexual movements, to which the man (usually *Malxas* in this group) responds with contortions in imitation of the baboon. On returning to the group of women and girls clapping, the woman will go through the usual process of looking for vermin in their heads, on their bodies, and as she gets worked up, even on their aprons. All this goes on while the rest are dancing with various contortions in imitation of baboons.

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[6] This is done by Professor P. R. Kirby in his section on music.

(b) *Wedding Dance :*

A wedding dance was enacted for us to see the complete ceremony. The couple, *//ˀa¯ku* and *Haki*, a middle-aged couple, had married about a fortnight previously, but they went through the dance again. The bride, with face painted, was adorned in her best with strings of beads, a skin cap with the animal's ears protruding above, and she had put on in addition a European belt with a buckle and a pair of veldschoens. She sat in one of the shelters (_//ŋ̲) with a woman on one side and a man on the other side of her. Similarly arrayed in his best, the bridegroom sat in his shelter with a woman on one side and a man on the other. His shelter had been specially adorned with fresh grass and the fence round the courtyard in front improved with new green bushes, while all had been swept clean. Meanwhile several of the girls and boys had commenced to make a dance ring in the space between the two shelters (which were about five shelters apart from one another). As the clapping and singing commenced the three in the bridal shelter commenced to dance towards the ring, the two supporters holding the bride's arms as they danced with her between them. At the same time the trio from the bridegroom's shelter commenced to dance together towards the ring. When the two parties reached the ring the bride and bridegroom joined arms, their supporters linking up two on either side of them, so that there was a line of six holding arms and dancing slowly towards the bridegroom's shelter. Others were dancing around them backwards and forwards. As the dance approached the bridegroom's shelter, a number of women danced out to meet those approaching and by their movements urged them back ; so the wedding party danced back a few paces and then came forward again. This movement was repeated several times, and then the women in front of the bridegroom's shelter changed their attitude to one of inviting and the whole party moved forward. But they did not go straight to the entrance to the courtyard, they slowly encircled the whole shelter and then were gradually drawn into the enclosure by the inviting women, until eventually the original six danced right into the shelter, the supporting four dancing out again and leaving the bridal couple seated together inside. (See plates 31—39.)

(c) *Induction Dance :*

During our stay at Bain's camp, a small party of Bushmen consisting of two families, *Uye*, his wife */ˀabes* and their six children, and */ˀakʼa¯kap*, his wife *Tatabe¯sa* and their two children, who had been hunting jackal and fox in the *Aop-≠ŋosop* area, joined the camp. They slept the first night near some bushes a little distance from the main camp of the Bushmen. The following evening we were fortunate to witness during the dancing their induction into the major group. It was as follows:

A dance was commenced by the Bushmen already settled at the camp, their women folk standing around two fires, clapping and singing. *Uye's* group were seated apart around a third fire. After a little while *Uye* and */ˀakʼa¯kap* got up and for a little joined the other men in dancing —they appeared shy and distant as they did it; then they returned to their fire. As soon, however, as a lull came in the singing of that dance, the two new women */ˀabes* and *Tatabe¯sa* began a dance-tune new to the settled group. The women before the other fires stood and watched in seeming perplexity, but the men quickly commenced to dance, at first round the old ring; then they began to move off that ring and approach the group round the new-comers' fire. They danced more and more excitedly, the sand flying over the children seated round the fire. Backwards and forwards they danced, *Uye* and */ˀakʼa¯kap* joining in, until the two new women also were drawn out to make the flirtation entrance into the ring, the men escorting them in a complete revolution, with arms outstretched over them and fox-tail wands waving. All attention was drawn to this new group, who now struck up a second new tune and the dance circle was moved towards their fire. After the second dance, during which the other women had stood idle watching, there started a third which they all knew and the women of the camp joined in the clapping. While this was going on the women and children of the new group transferred to the two fires belonging to the old group and one dancing party was formed. All shyness and reserve was now gone, and all danced together as a unit.

We observed that the next morning *Uye* and his companion with their wives were busy with bushes and grass erecting their shelters in the line of shelters of the already established Bushmen. So were they all inducted into the community.

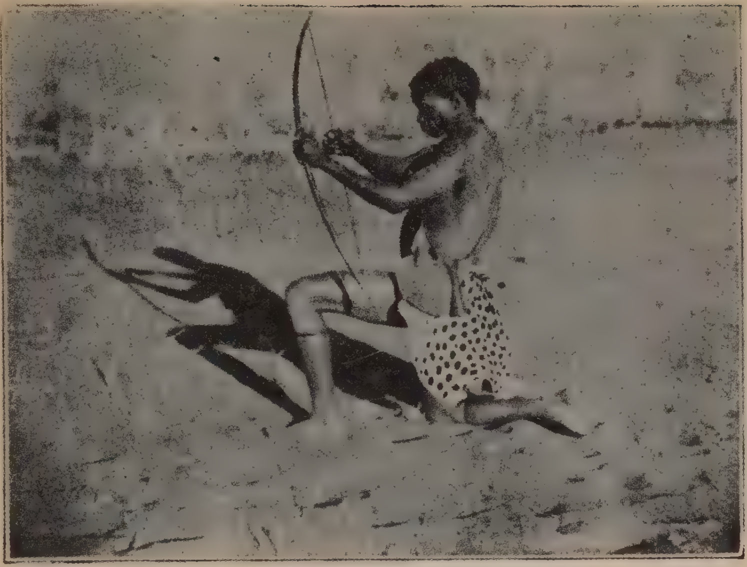


Plate 13. Malxas with bow and arrow

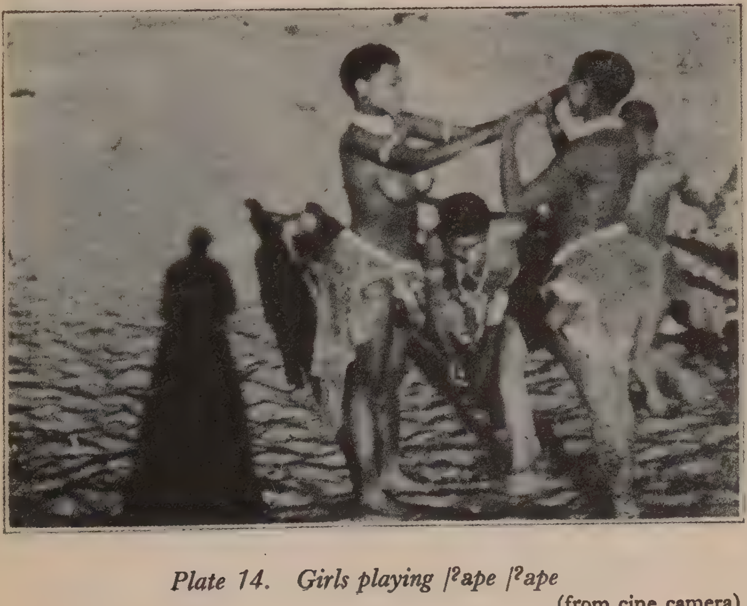


Plate 14. Girls playing |ˀape |ˀape
(from cine camera)

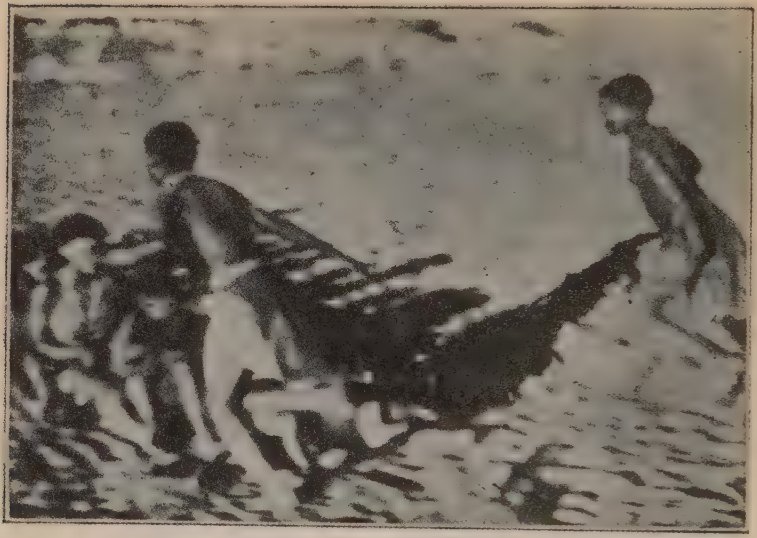


Plate 15. Hawks approaching line of girls sitting
(from cine camera)

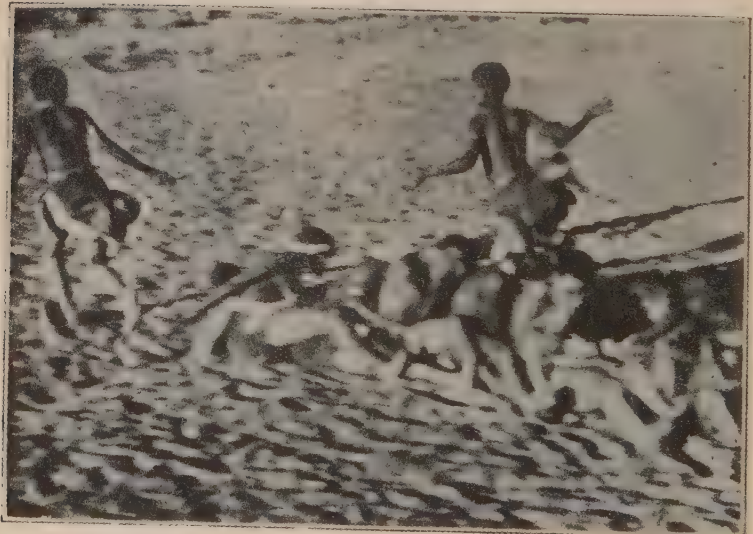


Plate 16. Hawks passing the line of girls
(from cine camera)

Plate 17. Hawks pouncing on their prey
(from cine camera)

Plate 18. Hawks devouring prey
(from cine camera)

Plate 19. *How the ||kabisike is held*

Plate 20. *Playing ||ka-bi*

(from cine camera)

Plate 21. Playing "guess which hand"
(from cine camera)

Plate 22. The lions stalking springbok
(from cine camera)

Plates 23 & 24. Girls as springbok
(from cine camera)

Plate 25. Lion devouring prey : another " kill " lying in front
(from cine camera)

Plate 26. Two lions in final combat
(from cine camera)

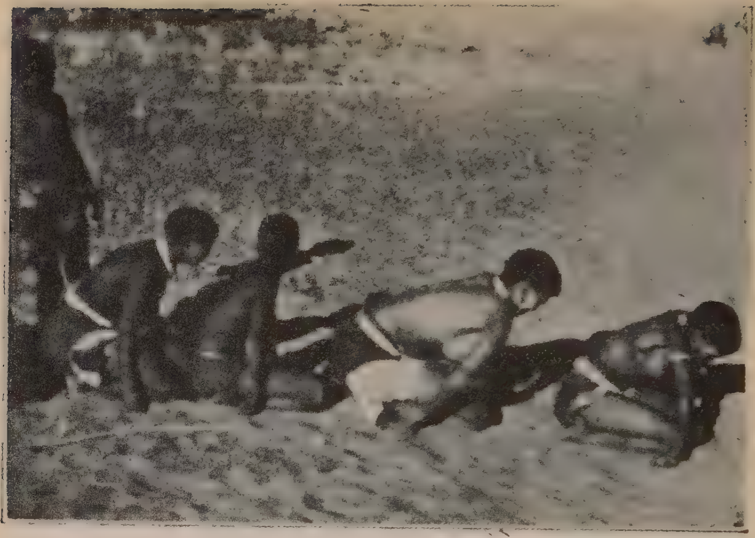


Plate 27. *Girls imitating tortoises*
(from cine camera)

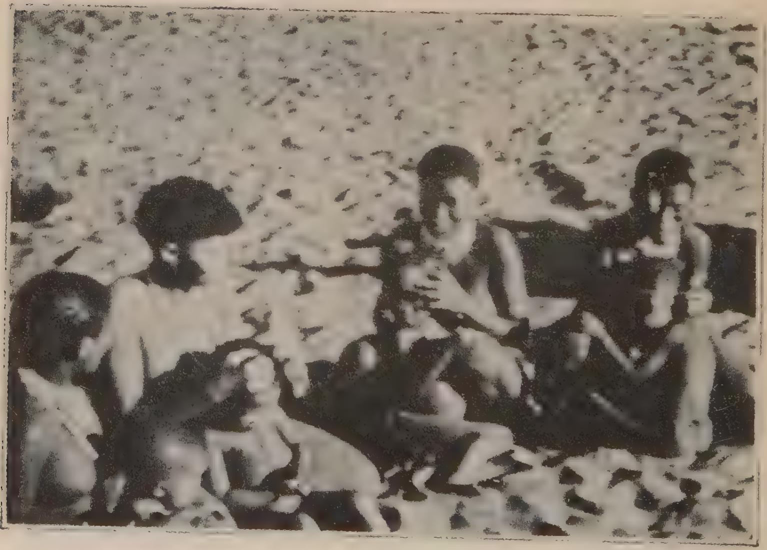


Plate 28. *Women imitating baboons with young*
(from cine camera)

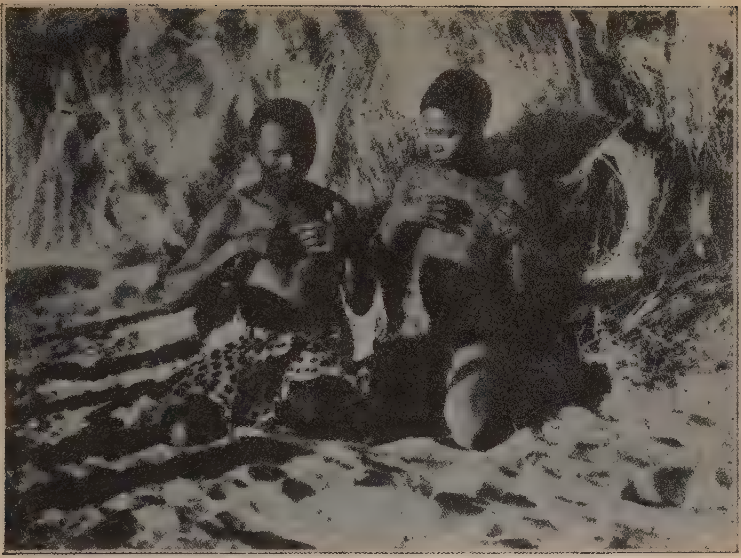


Plate 29. *Imitating the galloping of horses*

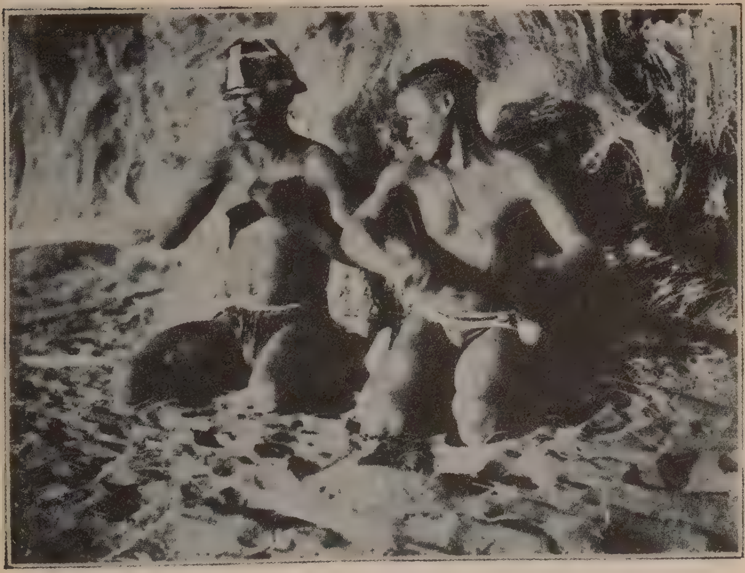


Plate 30. *Imitating the gait of old male baboon*

Plates 31 & 32. Girls preparing a dance ring
(from cine camera)

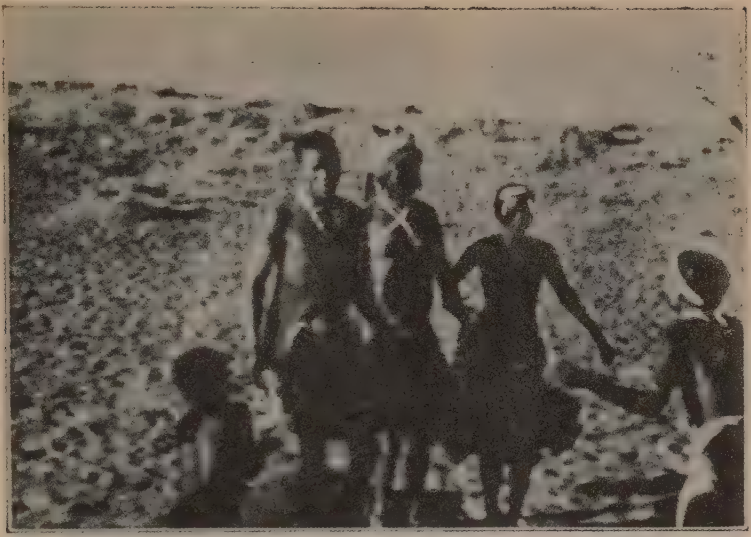


Plate 33. The bride being led to the dance ring
(from cine camera)

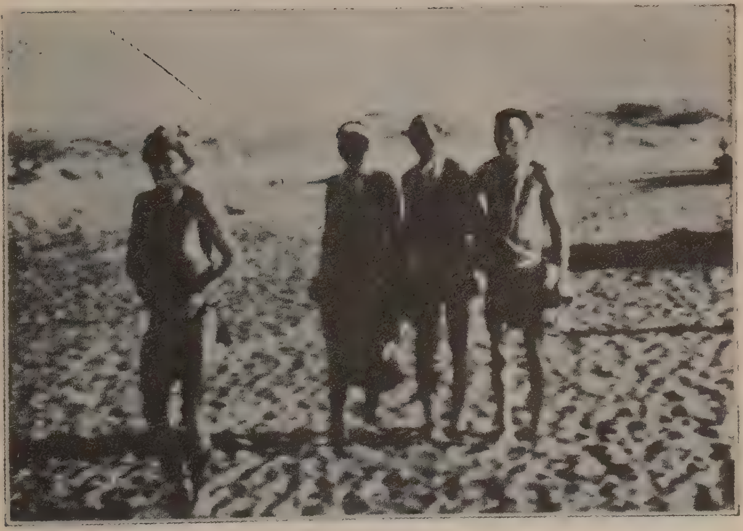
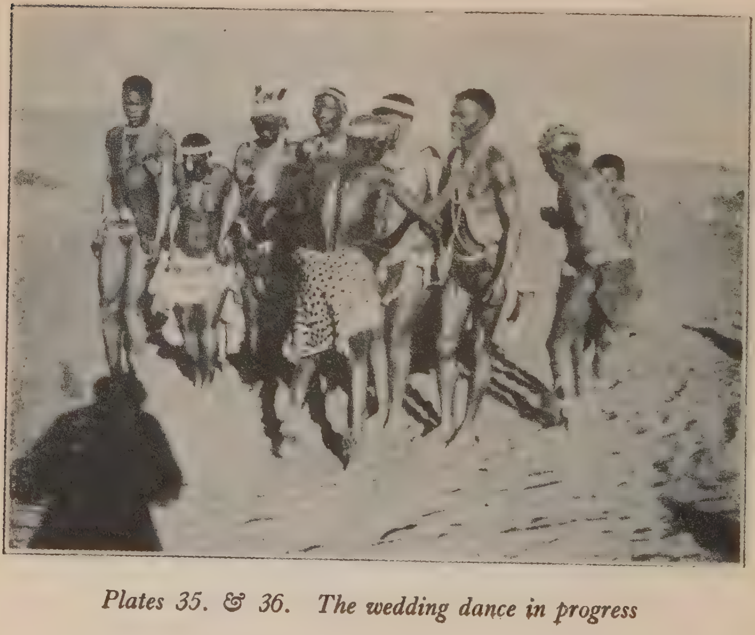
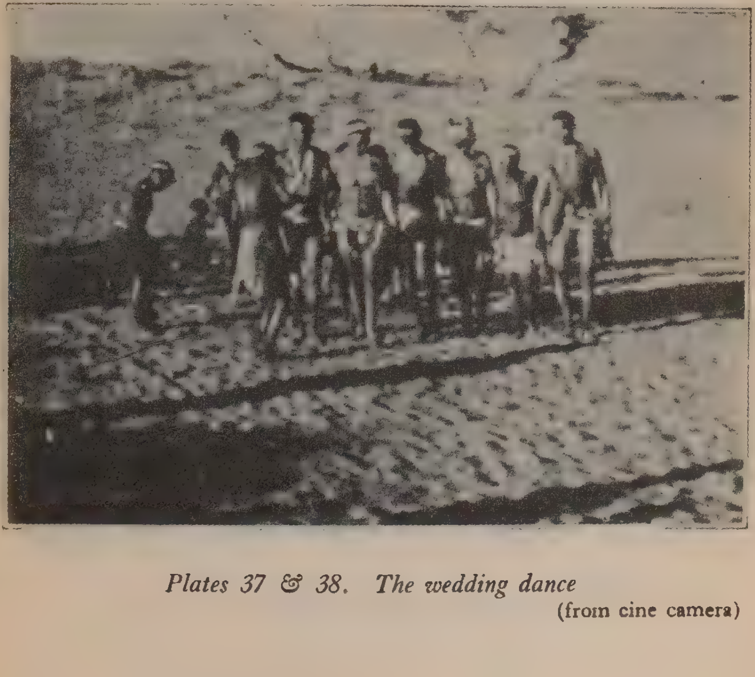


Plate 34. The bridegroom being led to the dance ring
(from cine camera)



Plates 35. & 36. The wedding dance in progress



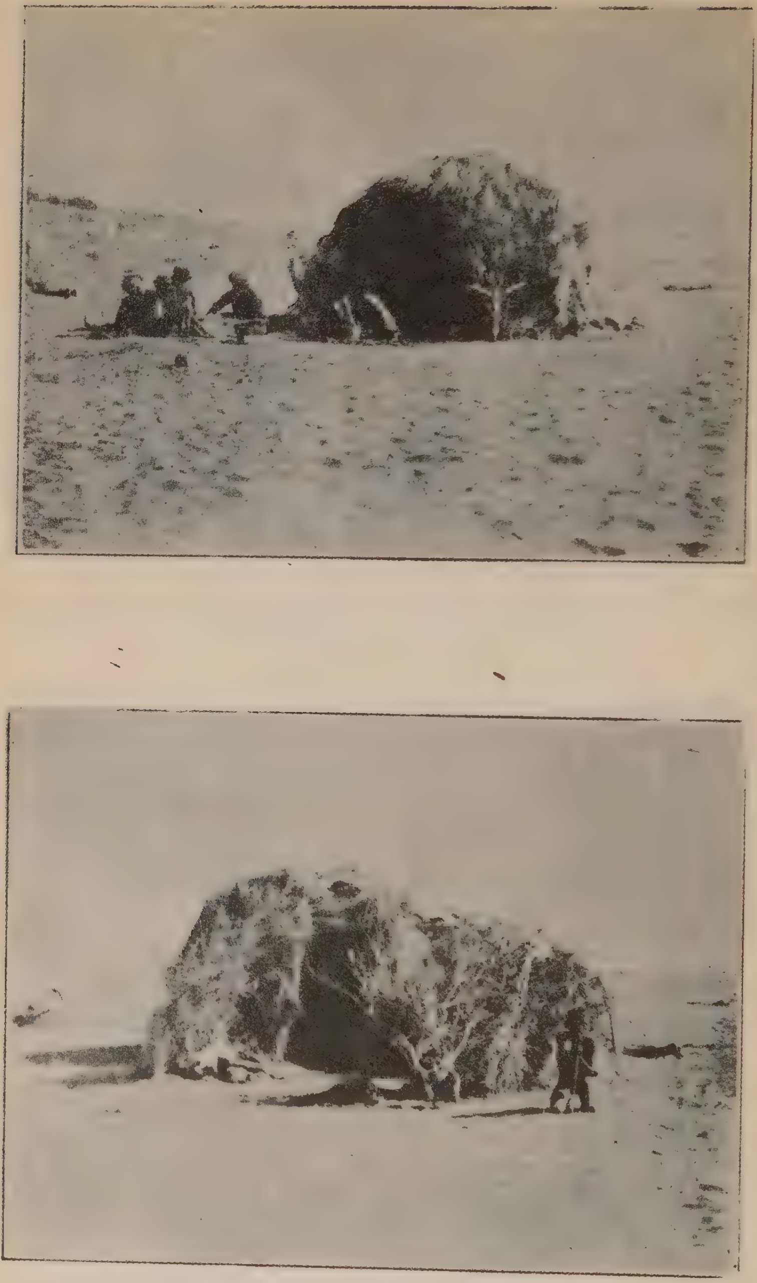
Plates 37 & 38. The wedding dance
(from cine camera)

Plate 39. //ˀa¯ku` and Haki after the wedding ceremony

Plate 40. Mother claps while baby dances

Plate 41. *General view of Bain's Bushman camp, shewing Bushman grass on the sand dunes*

Plates 42. *Malxas standing by stunted witgatboom*



Plates 43 & 44. Bushman shetters, -//ŋ

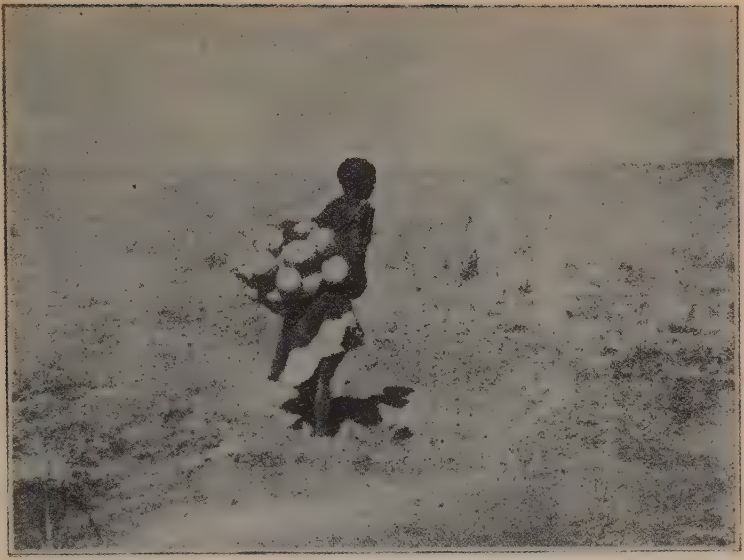


Plate 45. |ganaku carrying ostrich egg water containers in a net

Plate 46. Koros, a well-nourished Bushman baby

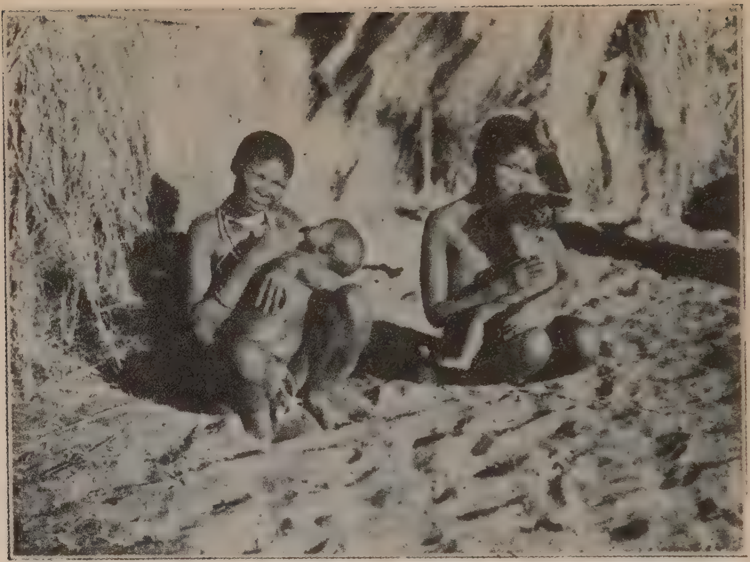


Plate 47. *Bushwomen with their babies*

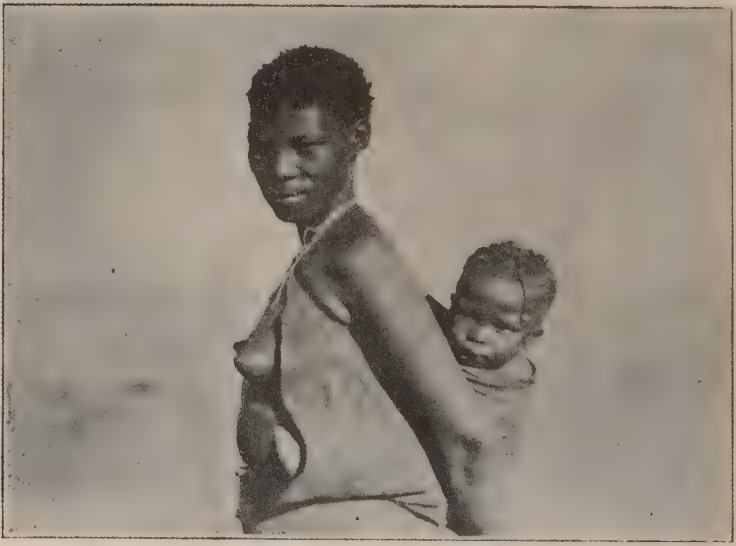


Plate 48. *Tatabesa, a Vaalpens Bushwoman and her baby*

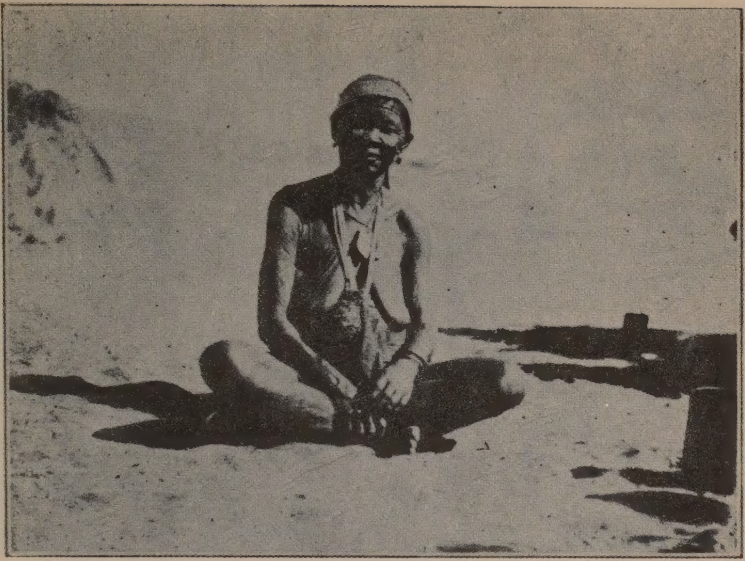


Plate 49. An elderly Bushwoman in characteristic sitting position

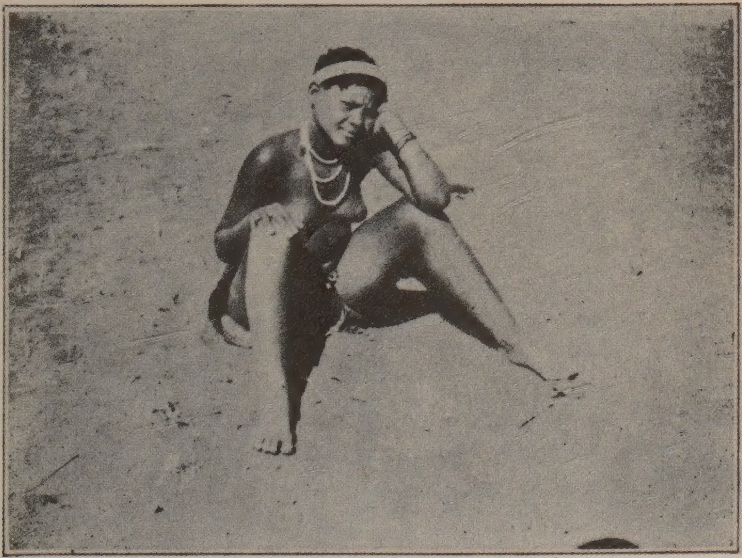


Plate 50. A half-caste Bush girl

Plate 51. !kuʔice, the patriarch of the ≠khomani group

Plate 52. An old |ʔauni Bushman

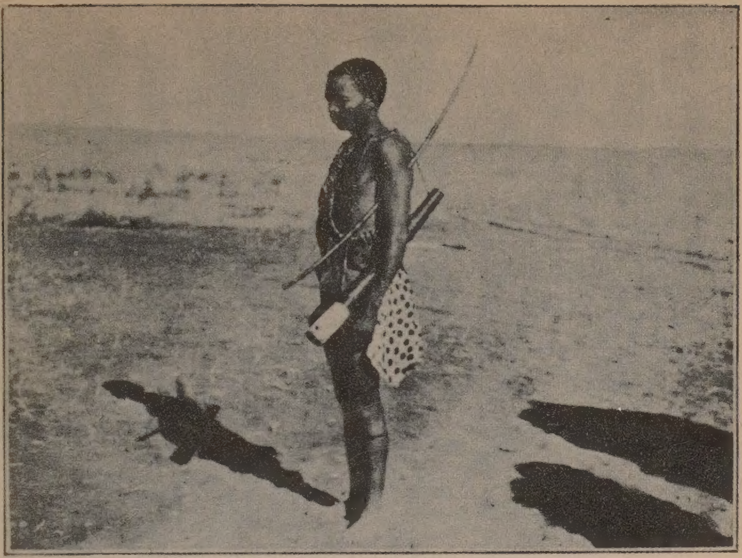


Plate 53. Malxas armed with bow and sheath of arrows and wearing dancing rattles as a bandolier

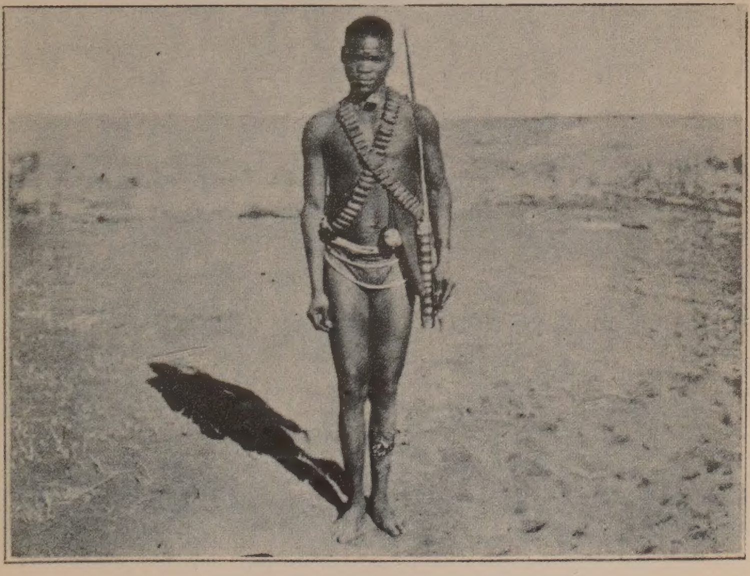


Plate 54. Witman similarly accoutred, with egg-shell beads around waist

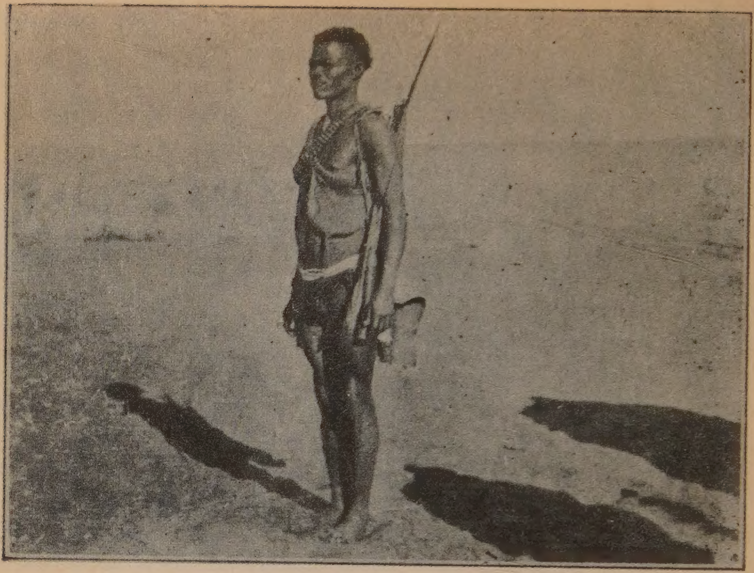


Plate 55. //ga¯//ŋa in full kit

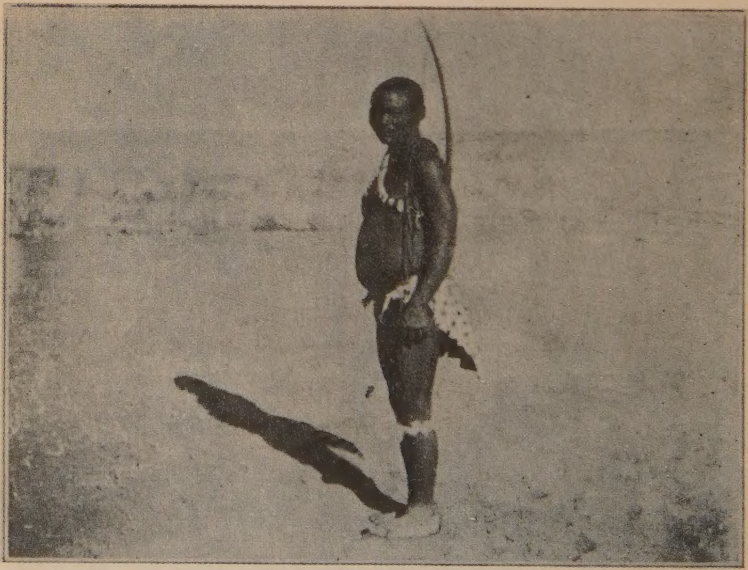


Plate 56. “ Platkop,” a ≠khomani Bushman